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ANNOUNCEMENT
OF THE
MEDICAL SCHOOL
LONGWOOD AVENUE, BOSTON, MASS.
OF
HARVARD UNIVERSITY
FOR
1913-14

WITH AN ANNOUNCEMENT FOR 1914-1915



PUBLISHED BY THE UNIVERSITY

1913							1914													
JULY							JANUARY							JULY						
Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa
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6	7	8	9	10	11	12	4	5	6	7	8	9	10	5	6	7	8	9	10	11
13	14	15	16	17	18	19	11	12	13	14	15	16	17	12	13	14	15	16	17	18
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17	18	19	20	21	22	23	22	23	24	25	26	27	28	16	17	18	19	20	21	22
24	25	26	27	28	29	30	23	24	25	26	27	28	29
31	30	31
SEPTEMBER							MARCH							SEPTEMBER						
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7	8	9	10	11	12	13	8	9	10	11	12	13	14	6	7	8	9	10	11	12
14	15	16	17	18	19	20	15	16	17	18	19	20	21	13	14	15	16	17	18	19
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NOVEMBER							MAY							NOVEMBER						
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16	17	18	19	20	21	22	17	18	19	20	21	22	23	22	23	24	25	26	27	28
23	24	25	26	27	28	29	24	25	26	27	28	29	30	29	30
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DECEMBER							JUNE							DECEMBER						
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14	15	16	17	18	19	20	14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	21	22	23	24	25	26	27	20	21	22	23	24	25	26
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MEDICAL SCHOOL CALENDAR

1913.

- Sept. 15, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 20, Saturday.* Examination in Chemistry for admission.
- Sept. 22, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 13, Monday.* Columbus Day : a holiday.
- Nov. 1, Saturday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 27, Thursday.* Thanksgiving Day : a holiday.
- Dec. 1, Monday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

RECESS FROM DEC. 21, 1913, TO JAN. 4, 1914, INCLUSIVE

1914.

- Jan. 15, Thursday.* Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1914.
- Jan. 28, Wednesday.* Mid-year Examinations begin.
- Jan. 31, Saturday.* Payment of the second instalment of the tuition-fee is required on or before this date.
- Feb. 2, Monday.* **Second half-year begins.**
- Feb. 23, Monday.* Washington's Birthday : a holiday.
- April 1, Wednesday.* Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 19 TO APRIL 25, INCLUSIVE

<i>May 1, Friday.</i>	Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
<i>May 1, Friday.</i>	Last day for receiving applications for the Bullard Fellowships.
<i>May 1, Friday.</i>	Last day for receiving applications for Scholarships for 1914-15 (except the Cheever and Hayden Scholarships).
<i>May 1, Friday.</i>	Last day for receiving applications of candidates for the degree of M.D. in 1914.
<i>May 30, Saturday.</i>	Memorial Day: a holiday.
<i>June 1, Monday.</i>	Examinations begin.
<i>June 13, Saturday.</i>	Examination in Chemistry for admission.
<i>June 18, Thursday.</i>	Commencement.

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 27,
INCLUSIVE

<i>Sept. 21, Monday.</i>	Examinations begin for applicants for advanced standing, and for men previously conditioned.
<i>Sept. 26, Saturday.</i>	Examination in Chemistry for admission.
<i>Sept. 28, Monday.</i>	Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
<i>Oct. 12, Monday.</i>	Columbus Day: a holiday.
<i>Nov. 2, Monday.</i>	Last day for receiving essays for the William H. Thorndike Prize.
<i>Nov. 26, Thursday.</i>	Thanksgiving Day: a holiday.
<i>Dec. 1, Tuesday.</i>	Last day for receiving applications for the Cheever and Hayden Scholarships.

THE MEDICAL SCHOOL

FACULTY OF MEDICINE*

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- CHARLES A. BRACKETT, D.M.D., *Professor of*
Dental Pathology, Newport, R.I.
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- EUGENE H. SMITH, D.M.D., *Professor of Clinical*
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Jackson Curator of the Warren Anatomical Museum,
Harvard Medical School.
- CHARLES S. MINOT, S.D., LL.D., *James Stillman*
Professor of Comparative Anatomy, and *Director of*
the Laboratory of Anatomy, Harvard Medical School.
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- WILLIAM P. COOKE, D.M.D., *Professor of Prosthetic*
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* Arranged, with the exception of the President and Dean, on the basis of collegiate seniority.

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- HERMAN F. VICKERY, M.D., *Instructor in Medicine*, 263 Beacon St.
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- HORACE D. ARNOLD, M.D., *Dean of the Graduate School of Medicine*, 520 Commonwealth Ave.
- MILTON J. ROSENAU, M.D., *Professor of Preventive Medicine and Hygiene*, 65 Naples Road, Brookline.
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- EDWARD H. NICHOLS, M.D., *Associate Professor of Surgery*, 294 Marlborough St.
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- ERNEST G. MARTIN, Ph.D., *Assistant Professor of*
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 FRANCIS W. PALFREY, M.D., *Secretary of the Faculty of Medicine, and Assistant in Medicine*, 80 Marlborough St.

FACULTY COUNCIL

- EDWARD H. BRADFORD, M.D., *Dean of the Faculty of Medicine*.
 ABNER POST, M.D., *Professor of Syphilis*.
 HAROLD C. ERNST, M.D., *Professor of Bacteriology*.
 ROBERT W. LOVETT, M.D., *Assistant Professor of Orthopedic Surgery*.
 OTTO FOLIN, PH.D., *Hamilton Kuhn Professor of Biological Chemistry*.
 HENRY A. CHRISTIAN, M.D., *Hersey Professor of the Theory and Practice of Physic*.
 CHARLES S. MINOT, S.D., LL.D., *James Stillman Professor of Comparative Anatomy and Director of the Laboratory of Anatomy*.

ADMINISTRATIVE OFFICES OF THE MEDICAL SCHOOL

The Dean's Office is in the Administration Building of the Medical School, Room 104. It is open daily from 9 to 1 and from 2 to 5, except on Saturdays, Sundays, and holidays; on Saturdays it is open from 9 to 1. Those seeking information about the Medical School should inquire at this office.

The Bursar's Office is in Dane Hall, Harvard University, Cambridge. It is open daily, except Sundays and holidays, from 9 to 1, for the receipt

of fees, payments, and other financial business. A representative of the Bursar will be in the Administration Building at the Medical School at stated hours on certain days at the opening of each term for the receipt of fees from regular students.

ADMINISTRATIVE OFFICERS OF THE MEDICAL SCHOOL

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Dean: EDWARD H. BRADFORD, M.D.

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Secretary of the Faculty: FRANCIS W. PALFREY, M.D.

Office, Administration Building, Medical School. Office hours, Tuesdays, 4 to 5 P.M.

Director of Scholarships: FRANKLIN DEXTER, M.D.

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Director for Appointments for Medical Alumni: A. B. EMMONS, 2d, M.D.

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Adviser to students in Harvard College preparing for the study of Medicine: WALTER B. CANNON, M.D.

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Dean of the Graduate School of Medicine: HORACE D. ARNOLD, M.D.

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Chief Clerk in the Dean's Office: HELEN G. MEDBURY.

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 252 Marlborough St.
- FREDERICK H. VERHOEFF, M.D., *Instructor in*
Ophthalmic Pathology, 5 Euston St., Brookline.
- GEORGE A. WATERMAN, M.D., *Instructor in Neu-*
rology, 410 Beacon St.
- PERCY BROWN, M.D., *Assistant in Roentgenology*, 155 Newbury St.
- GEORGE S. DERBY, M.D., *Assistant in Ophthalmol-*
ogy, 7 Hereford St.

- CHARLES H. DUNN, M.D., *Instructor in Pediatrics*,
178 Marlborough St.
- WILLIAM W. HOWELL, M.D., *Fellow in Pediatrics*,
279 Clarendon St.
- EDWIN A. LOCKE, M.D., *Instructor in Medicine*, 311 Beacon St.
- RICHARD G. WADSWORTH, M.D., *Fellow in Gynaecology*,
374 Marlborough St.
- HORACE BINNEY, M.D., *Assistant in Genito-Urinary Surgery*,
205 Beacon St.
- FREDERICK T. LORD, M.D., *Instructor in Medicine*, 305 Beacon St.
- NATHANIEL R. MASON, M.D., *Assistant in Obstetrics and Gynaecology*,
483 Beacon St.
- HENRY I. BOWDITCH, M.D., *Clinical Instructor in Pediatrics*,
416 Marlborough St.
- ROBERT L. DENORMANDIE, M.D., *Assistant in Obstetrics*,
357 Marlborough St.
- HAROLD A. GALE, M.D., *Fellow in Pediatrics*, Winchester.
- HARRY W. GOODALL, M.D., *Assistant in Biological Chemistry*,
205 Beacon St.
- F. ROBERTSON SIMS, M.D., *Assistant in Neuro-pathology*,
79 W. Foster St., Melrose.
- BETH VINCENT, M.D., *Assistant in Surgery*, 295 Beacon St.
- ZABDIEL B. ADAMS, M.D., *Fellow in Anatomy*, 166 Newbury St.
- CLEAVELAND FLOYD, M.D., *Instructor in Bacteriology*,
246 Marlborough St.
- JOHN HOMANS, M.D., *Associate in Surgery*, 39 Pilgrim Road.
- HENRY T. HUTCHINS, M.D., *Assistant in Gynaecology*,
374 Marlborough St.
- FRANK L. RICHARDSON, M.D., *Lecturer on Anaesthesia*,
543 Boylston St.
- WILLIAM B. ROBBINS, M.D., *Assistant in Medicine*,
356 Marlborough St.
- J. DELLINGER BARNEY, M.D., *Assistant in Genito-Urinary Surgery*,
384 Commonwealth Ave.
- HAROLD W. DANA, M.D., *Assistant in Bacteriology*,
121 Centre St., Brookline.
- CALVIN B. FAUNCE, JR., M.D., *Assistant in Otology*, 95 Newbury St.
- JOHN B. HARTWELL, M.D., *Assistant in Anatomy*,
260 Clarendon St.
- EDWIN H. PLACE, M.D., *Clinical Instructor in Pediatrics*,
745 Massachusetts Ave.
- E. LAWRENCE OLIVER, M.D., *Assistant in Dermatology*,
362 Commonwealth Ave.

- FRITZ B. TALBOT, M.D., *Clinical Instructor in Pediatrics*, 100 Cottage Farm Road, Brookline.
- GEORGE H. WRIGHT, D.M.D., *Assistant in Laryngology*, 149 Newbury St.
- JAMES E. ASH, M.D., *Instructor in Pathology*, Harvard Medical School.
- GERALD BLAKE, M.D., *Assistant in Medicine*, 212 Beacon St.
- HENRY LYMAN, M.D., *Fellow in Biological Chemistry*, 36 Commonwealth Ave.
- CHARLES L. OVERLANDER, M.D., *Assistant in Medicine*, 535 Beacon St.
- G. CHEEVER SHATTUCK, M.D., *Assistant in Medicine*, 135 Marlborough St.
- GORDON BERRY, M.D., *Assistant in Otology*, 7 Highland Ave., Worcester.
- WALTER M. BOOTHBY, M.D., *Lecturer on Anaesthesia, and Assistant in Anatomy*, 508 Commonwealth Ave.
- ALBERT EHRENFRIED, M.D., *Assistant in Anatomy*, 362 Commonwealth Ave.
- FRED F. FLANDERS, Ph.D., *Fellow in Biological Chemistry*, 9 Norway St.
- ARIAL W. GEORGE, M.D., *Assistant in Roentgenology*, 259 Beacon St.
- ROBERT M. GREEN, M.D., *Instructor in Anatomy, and Assistant in Obstetrics and Gynaecology*, 78 Marlborough St.
- GEORGE W. HOLMES, M.D., *Assistant in Roentgenology*, 205 Beacon St.
- ROGER I. LEE, M.D., *Instructor in Medicine*, 99 Commonwealth Ave.
- EDWARD P. RICHARDSON, M.D., *Assistant in Surgery*, 224 Beacon St.
- EDWARD H. RISLEY, M.D., *Assistant in Anatomy*, 527 Beacon St.
- PHILIP H. SYLVESTER, M.D., *Assistant in Pediatrics*, 866 Beacon St., Newton Centre.
- JAMES B. AYER, M.D., *Assistant in Neurology and Neuropathology*, 518 Beacon St.
- ALEXANDER S. BEGG, M.D., *Instructor in Comparative Anatomy*, 706 Huntington Ave.
- EDWARD G. BIRGE, M.D., *Instructor in Preventive Medicine and Hygiene*, Harvard Medical School.
- WILLIAM J. BRICKLEY, M.D., *Fellow in Surgery*, 47 Chestnut St., Charlestown.
- JOHN BRYANT, M.D., *Assistant in Anatomy*, 338 Marlborough St.

N. CHANDLER FOOT, M.D., *Instructor in Pathology*,
Harvard Medical School.

ARCHIBALD McK. FRASER, M.D., *Assistant in Anatomy*,
69 Newbury St.

EMIL GOETSCH, M.D., *Assistant in Surgery*,
Peter Bent Brigham Hospital.

FRANCIS W. PEABODY, M.D., *Alumni Assistant in Medicine*,
Peter Bent Brigham Hospital.

RICHARD M. SMITH, M.D., *Assistant in Pediatrics*, 329 Beacon St.

LESLEY H. SPOONER, M.D., *Assistant in Bacteriology*,
260 Clarendon St.

JAMES H. YOUNG, M.D., *Assistant in Pediatrics*,
430 Centre St., Newton.

WALTER J. DODD, M.D., *Instructor in Roentgenology*,
Mass. General Hospital.

JAMES A. HONEIJ, M.D., *Fellow in Bacteriology*,
Harvard Medical School.

CHARLES H. LAWRENCE, JR., M.D., *Assistant in Medicine*,
374 Marlborough St.

WILLIAM S. WHITTEMORE, M.D., *Assistant in Anatomy*,
39 Brattle St., Cambridge

GEORGE CLYMER, M.D., *Assistant in Neurology*,
366 Commonwealth Ave.

LEWIS W. HACKETT, M.D., DR.P.H., *Instructor in Preventive Medicine and Hygiene*,
60 Wendell St., Cambridge.

ARTHUR A. HOWARD, M.D., *Clinical Instructor in Pediatrics*,
520 Commonwealth Ave.

HENRY F. KEEVER, M.D., *Assistant in Pediatrics*,
258 Melrose St., Auburndale.

GEORGE W. MORSE, Jr., M.D., *Assistant in Anatomy*, 13 Pinckney St.

LOUIS H. NEWBURGH, M.D., *Alumni Assistant in Medicine*,
Harvard Medical School.

THEODORE W. ELY, M.D., *Fellow in Pediatrics*, 374 Marlborough St.

ALFRED LUGER, M.D., *Assistant in Roentgenology*,
697 Huntington Ave.

HENRY C. MARBLE, M.D., *Alumni Assistant in Surgery*,
216 Newbury St.

WILLARD S. PARKER, M.D., *Fellow in Pediatrics*,
416 Marlborough St.

RALPH L. REYNOLDS, M.D., *Alumni Assistant in Obstetrics*,
376 Newbury St.

MARK F. BOYD, M.D., *Charles Follen Folsom Teaching Fellow in Hygiene*,
Harvard Medical School.

- 6 JAMES H. MEANS, M.D., *Henry P. Walcott Fellow in Clinical Medicine*, 196 Beacon St.
 6 JAMES L. MORRIS, A.M., *Assistant in Biological Chemistry*, 121 St. Stephen St.
 6 RICHARD D. BELL, M.D., *Fellow in Biological Chemistry*, 26 Bow St., Somerville.
 6 FREDERICK S. HAMMETT, S.M., *Teaching Fellow in Biological Chemistry*, 360 Longwood Ave.
 CARLON TENBROECK, M.D., *Assistant in Comparative Pathology*, Harvard Medical School.
 6 KURT H. THOMA, D.M.D., *Assistant in Dental Anatomy*, 330 Dartmouth St.
 LEWIS H. WEED, A.M., *Arthur Tracy Cabot Fellow in charge of the Laboratory of Surgical Research*, 640 Huntington Ave.
 6 EDWARD A. BOYDEN, A.M., *Teaching Fellow in Histology and Embryology*, Harvard Medical School.
 ALBERT A. W. GHOREYEB, M.D., *Assistant in Pathology*, Harvard Medical School.
 6 JAMES B. SUMNER, A.M., *Assistant in Biological Chemistry*, Canton.
 6 JOHN E. DWYER, JR., M.D., *Assistant in Pathology*, 878 Mass. Ave., Cambridge.
 6 CHARLES M. GRUBER, A.M., *Teaching Fellow in Physiology*, 706 Huntington Ave.
 6 JOHN G. MATEER, A.B., *Teaching Fellow in Physiology*, Harvard Medical School.
 6 FRANCIS B. GRINNELL, M.D., *Assistant in Preventive Medicine and Hygiene*, Dover, Mass.

AUSTIN TEACHING FELLOWS

- 6 WALTER L. MENDENHALL, M.D., *in Physiology*, 706 Huntington Ave.
 HALSEY B. LODER, M.D., *in Surgery*, 520 Commonwealth Ave.
 J. HOWARD BROWN, S.M., *in Comparative Pathology*, 24 Farrington Ave., Allston.
 RICHARD S. AUSTIN, M.D., *in Bacteriology*, Harvard Medical School.
 6 ROGER S. HUBBARD, A.M., *in Biological Chemistry*, Harvard Medical School.
 6 MAX M. MILLER, A.M., *in Histology and Embryology*, Harvard Medical School.

C. A. Binger, Harvard Med Sch
 Lawrence Gint " " "

HARVARD MEDICAL SCHOOL

BOSTON

GENERAL STATEMENT

The Harvard Medical School started as a branch of the University in 1782 when three professorships of medicine were established. The first degrees in medicine were conferred in 1788. Before 1811, the degree conferred was that of Bachelor of Medicine; after that date the degree of Doctor of Medicine was established. The first Medical School was built in Boston in 1815. In 1906, the Medical School moved into its new quarters on Longwood Avenue. For the construction and endowment of these new buildings the School is indebted to the generosity of Mrs. Collis P. Huntington, Messrs. J. Pierpont Morgan, John D. Rockefeller, David Sears, and a number of other benefactors. At the present time several hospitals are being or have been constructed on the grounds adjacent to the Medical School. A statement in regard to these hospitals and the other hospitals in which teaching is done will be found on pages 70-74 of this catalogue.

In 1910, under the supervision of the Department of Preventive Medicine and Hygiene, courses leading to a degree of Doctor of Public Health were established.

In 1913 the Graduate School of Medicine was established to take charge of the graduate instruction throughout the year, which had previously been given by the Harvard Medical School under the Courses for Graduates and the Summer School of Medicine. The Graduate School of Medicine will also take charge of all special students who are not candidates for the degree of Doctor of Medicine. For particulars, see page 84.

The academic year begins on the Monday preceding the last Wednesday in September, and ends on the Thursday preceding the last Wednesday in June. There is a Christmas recess from December 23 to January 2 inclusive, and a recess of one week's duration in April.

ADMISSION OF STUDENTS

I. Students who have acquired from a recognized college or scientific school a degree in arts or science are admitted as candidates for the degree of M.D., provided they present evidence that they have had satisfactory preliminary training in chemistry, physics, and biology. The courses in

chemistry should include general chemistry, organic chemistry, and qualitative analysis.

II. Students who have successfully completed two years of work in a recognized college or scientific school, provided they present certificates that one full year has been devoted to chemistry, physics, and biology, and that the student ranks in the upper third of his class, are also admitted as candidates for the degree of M.D.

ADMISSION TO ADVANCED STANDING

Students who began their professional studies in other recognized medical schools may be admitted to advanced standing and become candidates for the degree of M.D. under the following conditions:—

They must furnish a satisfactory certificate of time spent in medical studies, must pass examinations * and satisfy all requirements of laboratory and practical work in the branches already pursued by the class to which they seek admission, and fulfil all other requirements for admission enumerated under I or II.

A graduate of another medical school of recognized standing may obtain the degree of M.D. at this University, after a year's study in the undergraduate course, by passing all examinations and by fulfilling all requirements of laboratory and practical work required in the full undergraduate course, and by fulfilling all requirements for admission. These examinations may be taken only at the times set for the regular examinations.

DIVISION OF STUDENTS

Students are divided into four classes according to their time of study and proficiency. No student may advance with his class, or be admitted to advanced standing, until he has passed the required practical examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed the first general examination.

No student will be permitted to continue his membership in the School, if at the beginning of his second year he has failed on all of the practical examinations on first-year subjects.

In order that the time of study shall count as a full year, students of all classes must register at the Dean's office on Monday, the first day of the academic year.

Students are required to devote themselves exclusively to the work of the School.†

Any student may obtain a certificate of his period of connection with the School.

* For statement in regard to examinations, see p. 65.

† The intent of this rule is that students may not engage in hospital work during term time, except in so far as required by the School curriculum.

DIVISION OF STUDIES

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR ELECTIVES
Anatomy	Bacteriology	Medicine	Anatomy 1, 2, 3, 4, 5, 6, and 7
Histology and Embryology	Pathology	Surgery (written 2 hrs., practical 1 hr.)	Surgery 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10
Physiology	Anatomy	Clinical Surgery (written 1 hr., practical 1 hr.)	Orthopedic Surgery 1 and 2
Biochemistry	Preventive Medicine and Hygiene	Orthopedic Surgery	Obstetrics and Gynaecology 1 and 2
	Pharmacology	Roentgenology	Dermatology and Syphilis 1, 2, 3, and 4
	<i>Medicine</i>	Obstetrics	Neurology and Psychiatry 1, 2, 3, and 4
	<i>Surgery</i>	Gynaecology	Ophthalmology 1 and 2
	<i>Neurology</i>	Pediatrics	Otology 1, 2, and 3
	<i>Dermatology</i>	Dermatology	Laryngology 1 and 2
		Syphilis	
		Neurology	
		Preventive Medicine and Hygiene 1	
		Medicine 1 and 2	
		Tropical Medicine 1, 2, 3, 4, 5, and 6	
		Ophthalmology	
		Otology	
		Laryngology	
		<i>Genito-Urinary Surgery</i>	
		<i>Legal Medicine</i>	

NOTE. — Subjects not completed in a given year are in *italics*. In the fourth year, electives must be chosen aggregating 1000 hours; both half-courses and quarter-courses are offered occupying 125 and 65 hours respectively.

METHODS OF INSTRUCTION

During the first three years the following methods of instruction are adopted in the several departments:—

NOTE.—The figures at the right of the page indicate as accurately as can be ascertained the number of hours of instruction which each student receives in the different courses.

ABBREVIATIONS USED IN THE FOLLOWING PAGES, AND IN THE
TABULAR VIEWS

B.C.H.	= Boston City Hospital.
B.D.	= Boston Dispensary.
B.S.H.	= Boston State Hospital (Pierce and Austin Farms).
B.L.H.	= Boston Lying-in Hospital.
Ch.H.	= Children's Hospital.
E. and E.I.	= Massachusetts Charitable Eye and Ear Infirmary.
F.H. for W.	= Free Hospital for Women.
H.M.S.	= Harvard Medical School.
H.M.H.	= Huntington Memorial Hospital.
I.H.	= Infants' Hospital (Rotch Memorial Building).
L.I.H.	= Long Island Hospital.
McL.H.	= McLean Hospital.
M.G.H.	= Massachusetts General Hospital.
M.B.H.	= Massachusetts Babies' Hospital.
P.B.B.H.	= Peter Bent Brigham Hospital.
P.H.	= Psychopathic Hospital.
S.D.B.C.H.	= South Department, Boston City Hospital.
S.H.	= Samaritan Hospital.
S.O.P.D.	= Surgical Out-Patient Department.

Anatomy

- CHARLES S. MINOT, S.D., LL.D., *James Stillman Professor of Comparative Anatomy and Director of the Laboratory of Anatomy.*
 JOHN L. BREMER, M.D., *Assistant Professor of Histology.*
 JOHN WARREN, M.D., *Assistant Professor of Anatomy.*
 DAVID CHEEVER, M.D., *Assistant Professor of Surgical Anatomy.*
 FREDERIC T. LEWIS, M.D., *Assistant Professor of Embryology.*
 HARRIS P. MOSHER, M.D., *Instructor in Anatomy.*
 ROBERT M. GREEN, M.D., *Instructor in Anatomy.*
 ALEXANDER S. BEGG, *Instructor in Comparative Anatomy.*
 ARCHIBALD MCK. FRASER, M.D., *Assistant in Anatomy.*

JOHN B. HARTWELL, M.D., *Assistant in Anatomy.*

WALTER M. BOOTHBY, M.D., *Assistant in Anatomy.*

ALBERT EHRENFRIED, M.D., *Assistant in Anatomy.*

EDWARD H. RISLEY, M.D., *Assistant in Anatomy.*

JOHN BRYANT, M.D. *Assistant in Anatomy.*

GEORGE W. MORSE, Jr., M.D., *Assistant in Anatomy.*

WILLIAM S. WHITTEMORE, M.D., *Assistant in Anatomy.*

KURT H. THOMA, D.M.D., *Assistant in Dental Anatomy.*

EDWIN A. BOYDEN, A.M., *Teaching Fellow in Histology and Embryology.*

ZABDIEL B. ADAMS, M.D., *Fellow in Anatomy.*

MAX M. MILLER, A.M., *Austin Teaching Fellow in Histology and Embryology.*

In this department instruction is given in Anatomy, Comparative Anatomy, Histology, and Embryology. The department occupies the Morgan Anatomical Building, the dissecting rooms being in the wing designated B I, and the laboratories for Histology, Embryology, and Comparative Anatomy in the wing B II. There are separate rooms for fourth-year and graduate students and for various kinds of technical work. The class work is carried on by sections in unit rooms, which are well lighted, and thoroughly equipped. Each unit room measures twenty-three by thirty feet and is designed to accommodate twelve or twenty-four students. There is a large library which contains complete files of the most important anatomical and morphological journals, together with many standard works of reference, and in an adjoining room there is a collection of about ten thousand pamphlets. A card catalogue and a classified bibliography give ready access to the literature.

The laboratory offers exceptional facilities for work in human and comparative anatomy and embryology.

The Embryological Collection is a unique feature of the laboratory. It comprises over nineteen hundred series of sections of carefully selected vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection includes sixty series of sections from human embryos, several of which are of exceptional value, among them being two of the very youngest stages of man yet obtained. The collection of embryological models contains the standard series and many unique original models.

REGULAR COURSES

First Year.—This course is intended to teach the normal gross anatomy, histology, and embryology of the human body. Half of the time is devoted to work in the dissecting rooms, the other half to work in the histological and embryological laboratories. In the study of gross anatomy, each student makes a complete dissection of one side of the human body, and all of the class dissect the same part at the same time. The general order of dissection is as follows:—body-wall; lower extremity; thoracic, abdominal and pelvic cavities; upper extremity; head; neck. The study of the skeleton is carried on with the dissection. The lectures and demonstrations are arranged to follow closely the work in the dissecting room.

The part of the course dealing with microscopic anatomy is a study of cells, tissues, and organs, from the developmental standpoint. Cell structure and the fundamental tissues are considered first. This is followed by a study of chick embryos of 30 and 48 hours and pig embryos of 20 days, in which special stress is laid on the origin and growth of the different organs. During the remainder of the course the organs of the adult are studied in succession. In connection with the uterus, the human placenta and fetal membranes are considered. The month of January is devoted to the central nervous system and sense organs.

Microscopes.—Every student is advised to purchase a microscope, but microscopes may be rented at four dollars for the term.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 47.

FIRST YEAR

<i>October, November, December, and January</i>	HOURS
Lectures. Professor MINOT, Asst. Professors LEWIS, WARREN, and BREMER. <i>Eleven lectures a week, nine hours.</i>	144
Demonstrations. <i>To sections of the class, at the pleasure of the instructors.</i>	
Laboratory work. <i>Six and one-half hours five times a week.</i>	520

Second Year.—The second-year course in anatomy will be given during February and March. The class will be divided into sections and each section will have approximately four hours per week. The work will consist chiefly of the careful study and drawing of frozen sections and of dissections and specimens of various sorts. There will also be a certain number of lectures or demonstrations on applied anatomy to emphasize those practical details which are essential for clinical work. The work in the laboratory is planned to be carried on in close coöperation with the clinical studies in medicine and surgery.

SECOND YEAR

February and March

Lectures, demonstrations, and laboratory work to sections of the class, four hours per week. 36

INVESTIGATION

Special accommodations are furnished in the laboratory for students who wish to pursue special or advanced work. Special facilities are offered to original investigators, who will receive such personal aid as may be necessary or advantageous.

A special course in vertebrate embryology is given during the second term; this has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments.

Physiology

WALTER B. CANNON, M.D., *George Higginson Professor of Physiology.*

ERNEST G. MARTIN, Ph.D., *Assistant Professor of Physiology.*

PERCY G. STILES, Ph.D., *Instructor in Physiology.*

ALEXANDER FORBES, M.D., *Instructor in Physiology.*

CHARLES M. GRUBER, A.M., *Teaching Fellow in Physiology.*

JOHN G. MATEER, A.B., *Teaching Fellow in Physiology.*

WALTER L. MENDENHALL, M.D., *Austin Teaching Fellow in Physiology.*

First Year.—The instruction in Physiology is based, as far as possible, on observations made by the students in laboratory experiments. The experiments are selected to impress the student with the methods and the most important facts in the various divisions of the subject. Physiological processes not readily observed in the laboratory the student learns with an insight derived from practical experience in experimentation. The arrangement of the experiments is in general such that the student first learns of what activity an organ or tissue is capable, next how certain factors condition or modify that activity, and finally what may be the effect of the activity. The experiments have also been so arranged as to place those with more general bearing first, and those with special interest later. Thus reference to previously acquired information becomes more and more possible as the course proceeds.

The amount of time devoted to laboratory exercises is approximately one hundred and sixty hours. Each student is required to preserve a record of his experiments and observations in a laboratory note-book. These records are examined and criticised.

Observations of his own experiments by the student are supplemented by more than thirty special demonstrations. These exercises, some of which are performed by students under the direction of an assistant, are closely correlated with the other objective instruction. The function of the depressor nerve, motor localization in the cerebral cortex, the action of secretin and of enterokinase, and the effects of lymphagogues are examples of subjects which are demonstrated.

The facts observed in the laboratory and in the demonstrations are discussed in lectures and theses. The lectures, about ninety in number, are informal discussions permitting questions by the students or by the instructor. In these discussions the laboratory experiments are correlated with one another and with the body of physiological knowledge. Supplementing the lectures are the theses. A thesis in Physiology, based upon reading of the records of original investigations, is required of each student. The Bowditch Library of Physiology and Biological Chemistry, containing about four thousand volumes and about twelve thousand reprints, is open to students for reference and reading. Wednesday morning of each week is largely devoted to work in the Library. Some of the theses, which are closely related to the regular instruction, are presented before the class. Among those read publicly during the past academic years were: Color-blindness, Heart-block, Physiological economy of nutrition, Natural defenses of the organism.

In order that students shall review the work repeatedly as the course proceeds, and also that the instructors may judge the efficiency of the teaching, the class is quizzed orally every week by the instructing staff. Usually at the end of each general division of the subject, as, for example, the nervous system, or the circulation, a written test is given. The examination books are returned, corrected, to the students. Five questions are asked; as examples the following are illustrative: What are the effects of stimulating the vasoconstrictor nerves of any particular organ? Cite morphological and physiological evidence for segmental arrangement of the nervous system. Discuss cortical localization.

If in the quizzes and tests many students show that certain points are not clearly understood, these points are briefly discussed again before the class. If a student reveals by his answers general failure to grasp the subject intelligently, he is personally conferred with regarding the character of his work. Such conferences are held after the first six weeks of the course, and usually result in a better understanding between the instructor and the student, and frequently in a marked improvement in the student's efforts.

Students who have had, before entering this course, a large part of the laboratory work or much laboratory experience may be permitted to coop-

erate with members of the staff in special investigations. Such students are excused from the preparation of theses.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 49.

FIRST YEAR (Second half)	HOURS
Laboratory experiments. Professor CANNON, Asst. Professor MARTIN, Drs. FORBES, STILES, MENDENHALL, and Mr. GRUBER.	
<i>Daily.</i>	176
Quizzes (14). <i>One hour Saturdays.</i>	14
Written tests (5). <i>One hour Mondays.</i>	5
Lectures (90). Professor CANNON, Asst. Professor MARTIN, and Dr. FORBES.	90
Special demonstrations (30). Professor CANNON, Asst. Professor MARTIN, and Dr. FORBES.	15
Discussion of Theses (30).	10
Thesis. Written by each student from the original sources.	
Reading of investigations. The reading of investigations and the discussion of these at the appropriate conference.	

INVESTIGATION

Any student, properly qualified, who desires to engage in physiological research will be welcomed into the laboratory and will be offered every facility for research which the laboratory affords.

Comparative Physiology

WILLIAM T. PORTER, M.D., LL.D., *Professor of Comparative Physiology.*

I. *Physiological Research.* Students qualified for research will pursue their investigations under the immediate direction of the professor in charge.

II. *Comparative Physiology of Muscle.* Professor PORTER. Three hours weekly during February and March.

III. *Physiological Conference.* Professor PORTER. Demonstrations with informal discussions of selected problems in physiology. Mondays and Thursdays, 5 to 6 P.M., throughout the year.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 50.

Biological Chemistry

OTTO FOLIN, Ph.D., *Hamilton Kuhn Professor of Biological Chemistry.*
 LAWRENCE J. HENDERSON, M.D., *Assistant Professor of Biological Chemistry.*

HARRY W. GOODALL, M.D., *Assistant in Biological Chemistry.*

JAMES L. MORRIS, A.M., *Assistant in Biological Chemistry.*

JAMES B. SUMNER, A.M., *Assistant in Biological Chemistry.*

FREDERICK S. HAMMETT, M.S., *Teaching Fellow in Biological Chemistry.*

HENRY LYMAN, M.D., *Fellow in Biological Chemistry.*

FRED F. FLANDERS, Ph.D., *Fellow in Biological Chemistry.*

RICHARD D. BELL, M.D., *Fellow in Biological Chemistry.*

ROGER S. HUBBARD, A.M., *Austin Teaching Fellow in Biological Chemistry.*

First Year.—The lectures in this course consist of a brief discussion by Dr. HENDERSON and Mr. MORRIS of the theories of chemical constitution and a survey of those classes of chemical substances which are to be found in animals and plants, and of the general principles and more important facts of physiological chemistry, by Professor FOLIN and Dr. GOODALL.

The laboratory practice is designed to acquaint the student with some of the more important constituents of living matter and their chemical behavior, and with some of the routine methods of Biochemical investigation.

Conferences and discussions of selected topics supplement the main work of the course.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 50.

FIRST YEAR (Second half)

HOURS

Lectures. Professor FOLIN and Asst. Professor HENDERSON. *One hour five times a week.* 80

Laboratory work. Professor FOLIN, Mr. MORRIS, Mr. HAMMETT and Mr. HUBBARD. *Two and one-half hours five times a week.* 200

Bacteriology

HAROLD C. ERNST, M.D., *Professor of Bacteriology.*

S. BURT WOLBACH, M.D., *Assistant Professor of Bacteriology.*

LANGDON FROTHINGHAM, M.D.V., *Instructor in Bacteriology.*

CALVIN G. PAGE, M.D., *Instructor in Bacteriology.*

CLEAVELAND FLOYD, M.D., *Instructor in Bacteriology.*

HENRY J. PERRY, M.D., *Assistant in Bacteriology.*
 HAROLD W. DANA, M.D., *Assistant in Bacteriology.*
 LESLEY H. SPOONER, M.D., *Assistant in Bacteriology.*
 JAMES A. HONEIJ, M.D., *Fellow in Bacteriology.*

RICHARD S. AUSTIN, M.D., *Austin Teaching Fellow in Bacteriology.*

Second Year.—Required bacteriology is taught by lectures and practical laboratory work. The lectures treat of the general subject and of methods of practical work. In the laboratory each student has an opportunity to become familiar with the simpler methods of manipulation and staining which are of especial clinical value, and with the more prominent of the pathogenic bacteria.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 50.

SECOND YEAR

HOURS

Lectures. Professor ERNST. <i>Daily, except Saturdays, during October and November.</i>	40
Laboratory work. Professor ERNST, and Drs. FROTHINGHAM, PAGE, PERRY, DANA, and FLOYD. <i>Two to three hours daily during October and November.</i>	120

Pathology

WILLIAM T. COUNCILMAN, M.D., LL.D., *Shattuck Professor of Pathological Anatomy.*
 FRANK B. MALLORY, M.D., *Associate Professor of Pathology.*
 JAMES H. WRIGHT, M.D., S.D., *Assistant Professor of Pathology.*
 ERNEST E. TYZZER, M.D., *Assistant Professor of Pathology.*
 HOWARD T. KARSNER, M.D., *Assistant Professor of Pathology.*
 FREDERICK H. VERHOEFF, M.D., *Instructor in Ophthalmic Pathology.*
 JAMES E. ASH, M.D., *Instructor in Pathology.*
 NATHAN CHANDLER FOOT, M.D., *Instructor in Pathology.*
 JOHN E. DWYER, JR., M.D., *Assistant in Pathology.*
 ALBERT A. W. GHOREYEB, M.D., *Assistant in Pathology.*

Second Year.—The course in Pathology consists of laboratory work and lectures. The basis of the laboratory work is the systematic course in pathological histology. In connection with this there are demonstrations of material bearing on the subjects studied and experiments. In this work the students are divided into small sections. The demonstrations are given to these sections and the experimental work on anaesthetized

animals is carried out by the sections under the direction and supervision of Asst. Professor KARSNER, who has charge of this branch of the work. The demonstrations and experimental work are given in rooms adjoining the main laboratory which are adequately provided with apparatus. Both the demonstrations and experiments are in connection with the subjects which are being studied. Lectures are given five days in the week, the object of the lectures being rather to expand and coördinate the knowledge which the student is acquiring by his study of material than to impart new information. During the entire period of the course groups of students are sent to the various hospitals to see and assist in post-mortem examinations. Each group prepares microscopical specimens of the tissues from the autopsy, which are studied under direction and described. No attempt is made to separate the subject of Pathology into general pathology and pathological anatomy, but the subject is studied as a whole. In teaching the student is taught methods of work, is given material, and directed; but he is taught to work independently. Tumors and other material coming from the surgical clinics are made full use of in the course.

On Saturdays conferences and recitations are substituted for the regular laboratory work.

In the forenoons of the second and third weeks of December, Professor T. SMITH gives a course of lectures and laboratory exercises on animal parasites, particularly the protozoa and the infections produced by them.

During the afternoons of December and January two courses are given in the special pathology of neurology and surgery; the courses constitute a valuable introduction to the clinical work required in these subjects in the third year.

These courses are :—

- (a) Fifteen demonstrations and laboratory exercises on the pathology of the nervous system. (See Neurology.)
- (b) Twenty laboratory exercises in surgical pathology. (See Surgery.)

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 51.

SECOND YEAR

HOURS

Lectures. Professor COUNCILMAN. *Daily for fourteen weeks, October, November, December (first week only), and January.* 84

Lectures. Professor T. SMITH. *One hour daily, second and third weeks of December.* 12

Laboratory work. Professor COUNCILMAN, Assistant Professor KARSNER, Dr. ASH and Dr. FOOT. *Three hours daily during the forenoons of October, November, December (first week only), and January.* 252

Demonstrations and laboratory work. Professor T. SMITH. <i>Two hours daily, second and third weeks of December.</i>	24
Demonstration of autopsy material. Dr. J. H. WRIGHT. (M.G.H.) <i>One hour a week.</i>	
Neuropathology. Professor SOUTHARD. <i>Afternoons in December.</i>	45
Surgical Pathology. Associate Professor NICHOLS. <i>Afternoons in January.</i>	36

Legal Medicine

GEORGE B. MAGRATH, M.D., *Instructor in Legal Medicine.*

Second Year. — (1) Demonstrations of the pathological conditions met with in death following injuries of various sorts, and in sudden death, in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital during the forenoons of the first half-year, to sections assigned by the Pathological Department upon notification from Dr. MAGRATH.

(2) Instruction in the technique of medico-legal post-mortem examinations to be given coincidentally with (1).

Fourth Year. — Optional course; second half-year. (1) Instruction in the pathological conditions met with in death following injury, and in sudden death, by the case method, with special reference to the clinical and the medico-legal aspects in each case. Exercises based on autopsy, with discussion of the case, and held in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital.

(2) Legal Medicine: medicine in its relation to the requirements of law. Systematic lectures (not less than twelve) dealing with matters of importance to the physician, alike as practitioner and as a witness in court.

Comparative Pathology

THEOBALD SMITH, M.D., LL.D., S.D., *George Fabyan Professor of Comparative Pathology.*

MARSHAL FABYAN, M.D., *Instructor in Comparative Pathology.*

CARLON TENBROECK, M.D., *Assistant in Comparative Pathology.*

J. HOWARD BROWN, S.M., *Austin Teaching Fellow in Comparative Pathology.*

Second Year. — A short course on the pathogenic protozoa and higher animal parasites is given in January as a part of the course in Pathology (see above).

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 52.

SECOND YEAR		HOURS
Lectures. Professor T. SMITH. (H.M.S.)	<i>One hour daily, second and third weeks of January.</i>	12
Demonstrations and laboratory work. Professor T. SMITH, Assistant Professor TYZZER, and Dr. FABYAN.	<i>Two hours daily, second and third weeks in December.</i>	24

Preventive Medicine and Hygiene

MILTON J. ROSENAU, M.D.,	<i>Professor of Preventive Medicine and Hygiene.</i>
EDWARD G. BIRGE, M.D.,	<i>Instructor in Preventive Medicine and Hygiene.</i>
LEWIS W. HACKETT, M.D., Dr. P.H.,	<i>Instructor in Preventive Medicine and Hygiene.</i>
FRANCIS B. GRINNELL, M.D.,	<i>Assistant in Preventive Medicine and Hygiene.</i>
MARK F. BOYD, M.D., M.D.,	<i>Charles Follen Folsom Teaching Fellow in Hygiene.</i>

Second Year. — The instruction consists of lectures and demonstrations.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 53.

SECOND YEAR		HOURS
Lectures and demonstrations. Professor ROSENAU and assistants.	<i>Four times a week, second half-year.</i>	64

Pharmacology

REID HUNT, M.D.,	<i>Professor of Pharmacology.</i>
WORTH HALE, M.D.,	<i>Assistant Professor of Pharmacology.</i>

Courses in pharmacology are given in the second and in the fourth years. In the second year the instruction is given by lectures, recitations, demonstrations, and a short laboratory course in which the students have an opportunity of learning the physical and chemical properties of the most important drugs and of performing experiments illustrating the physiological actions of a number of these. A few exercises are given in pharmacy and materia medica, the work consisting of demonstrations and practical exercises. Some attention is also given to toxicology. During the fourth year an opportunity is offered to students of doing more advanced work in experimental pharmacology.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 53.

SECOND YEAR

HOURS

Lectures and demonstrations. Professor HUNT and Assistant Professor
HALE. *One hour twice a week, February, March, and April; one
hour four times a week, May.* 40

Laboratory work. *Two hours once a week, February, March, and April.*
24

Medicine

The Department of Medicine is composed of the sub-departments of the Theory and Practice of Physic and Clinical Medicine.

GEORGE G. SEARS, M.D., *Clinical Professor of Medicine.*

DAVID L. EDSALL, M.D., S.D., *Jackson Professor of Clinical Medicine.*

HENRY A. CHRISTIAN, M.D., *Hersey Professor of the Theory and
Practice of Physic.*

RICHARD C. CABOT, M.D., *Assistant Professor of Medicine.*

ELLIOTT P. JOSLIN, M.D., *Assistant Professor of Medicine.*

HERMAN F. VICKERY, M.D., *Instructor in Medicine.*

WILLIAM H. SMITH, M.D., *Instructor in Medicine.*

THOMAS ORDWAY, M.D., *Instructor in Medicine.*

CHANNING FROTHINGHAM, Jr., M.D., *Instructor in Medicine.*

ARTHUR K. STONE, M.D., *Instructor in Medicine.*

HENRY F. HEWES, M.D., *Instructor in Medicine.*

FRANKLIN W. WHITE, M.D., *Instructor in Medicine.*

WILLIAM H. ROBEY, Jr., M.D., *Instructor in Medicine.*

GEORGE S. C. BADGER, M.D., *Instructor in Medicine.*

JOSEPH H. PRATT, M.D., *Instructor in Medicine.*

EDWIN A. LOCKE, M.D., *Instructor in Medicine.*

FREDERICK T. LORD, M.D., *Instructor in Medicine.*

ROGER I. LEE, M.D., *Instructor in Medicine.*

RALPH C. LARRABEE, M.D., *Assistant in Medicine.*

FRANCIS W. PALFREY, M.D., *Assistant in Medicine.*

WILLIAM B. ROBBINS, M.D., *Assistant in Medicine.*

GERALD BLAKE, M.D., *Assistant in Medicine.*

CHARLES L. OVERLANDER, M.D., *Assistant in Medicine.*

G. CHEEVER SHATTUCK, M.D., *Assistant in Medicine.*

CHARLES H. LAWRENCE, Jr., M.D., *Assistant in Medicine.*

LOUIS H. NEWBURGH, M.D., *Alumni Assistant in Medicine.*

FRANCIS W. PEABODY, M.D., *Alumni Assistant in Medicine.*

JAMES H. MEANS, M.D., *Henry P. Walcott Fellow in Clinical Medicine.*

The instruction given by the Department of Medicine consists of both clinical and laboratory work. The clinical work is given by means of lectures, clinical lectures, and practical work in the Out-Patient Depart-

ment and wards of the hospitals. Laboratory work is given at the Harvard Medical School in the laboratory of the Department. The laboratories are equipped for teaching routine clinical laboratory methods to the entire class, as well as for carrying on clinical or experimental medical research.

The general plan of the work will be to instruct the students during the second half of the second year in the methods of history-taking, physical examination, and clinical laboratory technique, to drill the students in the third year as assistants in the Out-Patient Departments of the hospitals, and in the fourth year to give them continued contact with patients by having them serve as clinical clerks in the hospital wards. Much of this work will be conducted in small sections, while lectures and clinical lectures will be given for the class with the view of presenting to the students a more comprehensive knowledge of medicine. This instruction will be in part at the Harvard Medical School, in part at the Peter Bent Brigham Hospital, the Massachusetts General Hospital, the Boston City Hospital, and several of the special hospitals. In these hospitals an abundant and varied clinical material is available for the conduct of these various exercises.

Second and Third Years.—*Lectures and recitations.* Lectures and recitations on selected topics will be given at the Medical School.

Clinical Lectures.—Clinical lectures in which the students are called upon to take an active part will be given in the amphitheatre of the Peter Bent Brigham Hospital, the Massachusetts General Hospital, and the Boston City Hospital.

Clinical Exercises.—Small sections of the class will be drilled thoroughly in the hospitals in the taking of histories, methods of physical examination, and in the examination of urine, blood, sputum, and gastric contents.

Laboratory.—Students will be instructed and exercised in the chemical, microscopical, and bacteriological methods used in the practice of medicine. It is expected that each student by frequent opportunity will attain the necessary proficiency to enable him to utilize these methods in the diagnosis and prognosis of disease.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 53.

SECOND YEAR	HOURS
Lectures on selected topics. Professor CHRISTIAN. (H.M.S.) <i>a week, second half-year.</i>	<i>Twice</i> 32
Clinical Lectures. Professor SEARS. (B.C.H.) <i>Once a week, second half-year.</i>	<i>Once a week, second</i> 16

Clinical lectures. Professor EDSALL. (M.G.H.)	<i>Once a week, second half-year.</i>	16
Exercises in sections.	<i>Each student has sixty exercises.</i>	90
Laboratory exercises. Dr. HEWES and assistants.	<i>Three times a week, second half-year. Two hour periods.</i>	96

THIRD YEAR

HOURS

Lectures on selected topics. Professor CHRISTIAN. (H.M.S.)	<i>Twice a week, first half-year.</i>	32
Lectures on selected topics. Assistant Professor CABOT. (H.M.S.)	<i>Twice a week, second half-year.</i>	32
Clinical lectures. Professor CHRISTIAN. (P.B.B.H.)	<i>Once a week throughout the year.</i>	32
Clinical lectures. Professor EDSALL (M.G.H.) and Professor SEARS (B.C.H.).	<i>Once a week throughout the year.</i>	32
Exercises in sections.	<i>Each section has forty-eight exercises of three hours each.</i>	144

Surgery

The Department of Surgery includes surgery, clinical surgery, operative surgery, surgical pathology, surgical technique, genito-urinary surgery, and the laboratory of surgical research.

HARVEY CUSHING, M.D., F.R.C.S., *Moseley Professor of Surgery.*

EDWARD H. NICHOLS, M.D., *Associate Professor of Surgery.*

CHARLES A. PORTER, M.D., *Associate Professor of Surgery.*

PAUL THORNDIKE, M.D., *Assistant Professor of Genito-Urinary Surgery.*

J. BAFST BLAKE, M.D., *Assistant Professor of Surgery.*

HOWARD A. LOTHROP, M.D., *Assistant Professor of Surgery.*

ROBERT B. GREENOUGH, M.D., *Assistant Professor of Surgery.*

HUGH CABOT, M.D., *Assistant Professor of Genito-Urinary Surgery.*

JAMES S. STONE, M.D., *Instructor in Surgery.*

CHARLES L. SCUDDER, M.D., *Associate in Surgery.*

WILLIAM E. FAULKNER, M.D., *Associate in Surgery.*

JOSHUA C. HUBBARD, M.D., *Associate in Surgery.*

DANIEL F. JONES, M.D., *Associate in Surgery.*

JOHN HOMANS, M.D., *Associate in Surgery.*

SAMUEL J. MIXTER, M.D., *Lecturer in Surgery.*

GEORGE H. MONKS, M.D., M.R.C.S., *Lecturer in Surgery.*

FRANCIS B. HARRINGTON, M.D., *Lecturer in Surgery.*

FRED B. LUND, M.D., *Lecturer in Surgery.*

FARRAR COBB, M.D., *Lecturer in Surgery.*

ERNEST A. CODMAN, M.D., *Lecturer in Surgery.*
FREEMAN ALLEN, M.D., *Lecturer in Anaesthesia.*
FRANK L. RICHARDSON, M.D., *Lecturer in Anaesthesia.*
WALTER M. BOOTHBY, M.D., *Lecturer in Anaesthesia.*
LEROI G. CRANDON, M.D., *Assistant in Surgery.*
LINCOLN DAVIS, M.D., *Assistant in Surgery.*
WALTER C. HOWE, M.D., *Assistant in Surgery.*
CHANNING C. SIMMONS, M.D., *Assistant in Surgery.*
HORACE BINNEY, M.D., *Assistant in Genito-Urinary Surgery.*
BETH VINCENT, M.D., *Assistant in Surgery.*
J. DELLINGER BARNEY, M.D., *Assistant in Genito-Urinary Surgery.*
EDWARD P. RICHARDSON, M.D., *Assistant in Surgery.*
EMIL GOETSCH, M.D., *Assistant in Surgery.*
HARRY F. HARTWELL, M.D., *Fellow in Surgery.*
WILLIAM J. BRICKLEY, M.D., *Fellow in Surgery.*
HENRY C. MARBLE, M.D., *Alumni Assistant in Surgery.*
LEWIS H. WEED, M.D., *Arthur Tracy Cabot Fellow in Charge of the
Laboratory of Surgical Research.*

HALSEY B. LODER, M.D., *Austin Teaching Fellow in Surgery.*

Instruction will be given by lectures, clinical lectures, demonstrations, and recitations, together with section teaching in the laboratories of surgical pathology and of surgical research, and in the wards and out-patient departments of the hospitals. Elective courses will be given in the laboratories of the Harvard Medical School, and in the wards and operating rooms of the hospitals.

Second Year.—The course in surgery begins in January of the second year. Lectures will be given Friday mornings at the Brigham Hospital, and Monday and Wednesday mornings at the Boston City Hospital. The afternoons in January will be given to surgical pathology, and to operative surgery and surgical technique on alternate days. Laboratory exercises in surgical pathology will be given three days a week in which will be studied the healing of wounds, fractures, diseases of the bones and joints, and such aspects of pathology as are of special surgical importance. Two clinical lectures a week, illustrating the lesions studied in the laboratory of surgical pathology, will be given at the Boston City Hospital. On two days a week the class will be divided into two sections,—one-half of the class will have an exercise in the general principles of surgery, the other half will have practical exercises in operative surgery.

The systematic course of lectures, clinical lectures, demonstrations and recitations will begin in February of the second year—one lecture, one

recitation and two clinical lectures a week. In the first two weeks the lectures and clinics will be devoted to surgical therapeutics. The general principles of surgery, beginning with trauma, hemorrhage, sepsis, etc., will be taken up in successive weeks, and illustrated by clinical lectures and demonstrations, until the end of the second half of the second year. During the first nine weeks of the second half of the second year, beginning February 1, section work in surgical technique will be given. Each student will have twelve laboratory exercises of two hours each, on the application of bandages and surgical apparatus, and the preparation and use of surgical material and dressings. Additional exercises will be given in sections, in the hospitals, on the practical application of bandages and surgical appliances. This course in surgical technique is designed to prepare the student for the required two months' "dresser" service in the surgical out-patient department of the Massachusetts General Hospital or the Boston City Hospital. Satisfactory service in this capacity during the third year is a necessary requirement for the degree.

Third Year.—During the third year, one lecture, one recitation, and two clinical lectures a week will be given throughout the year. On Wednesday a lecture will be given at the Brigham Hospital at 12.30 P.M., for the whole class. On Tuesday at 12 M. two clinical lectures will be given, one at the Boston City Hospital and one at the Massachusetts General Hospital, either of which may be attended by the student having section work at one or the other hospital. During May twelve surgical hours, in morning and in afternoon exercises, will be devoted to genito-urinary surgery. During the two months' required out-patient "dresser" service, sections of the class will be assigned to short terms of service in the Genito-Urinary Departments.

Fourth Year.—Opportunity is afforded in the fourth-year elective courses for practical work in the wards and operating rooms of the hospitals, as well as for special instruction in operative surgery, surgery of children, and experimental surgery, for students who are qualified to pursue these subjects. For a description of the fourth-year courses offered by this department, see page 56.

SECOND YEAR

HOURS

Laboratory course in Surgical Pathology. Associate Professor NICHOLS. (H.M.S.) <i>Twelve three-hour exercises during January.</i>	36
Laboratory course in Surgical Therapeutics. Professor CUSHING and Associates. (H.M.S.) <i>Eight three-hour exercises during January.</i>	24
Clinical lectures in connection with the course in Surgical Pathology. Associate Professor NICHOLS. (B.C.H.) <i>Eight exercises during January.</i>	8

Clinical lectures in Surgical Therapeutics. Professor CUSHING. (P.B.B.H.) *Four exercises during January.* 4

Laboratory course in Surgical Therapeutics. Associate Professor PORTER and Assistant Professor LOTHROP and assistants. *Eighteen two-hour exercises for each student during the second half of the second year.* 36

Lectures and demonstrations. Professor CUSHING, Associate Professors NICHOLS and PORTER, and Associates. (H.M.S.) *Once a week, second half-year.* 16

Recitations. Assistant Professors LOTHROP and GREENOUGH. *Once a week, second half-year.* 16

Clinical lectures. Associate Professor PORTER and Assistant Professor GREENOUGH (M.G.H.), Associate Professor NICHOLS and Assistant Professors LOTHROP and BLAKE (B.C.H.). *Twice a week, second half-year.* 32

THIRD YEAR

HOURS

Lectures and demonstrations. Professor CUSHING, Associate Professors PORTER and NICHOLS, and Associates. *Once a week, first and second half-year.* 32

Clinical lectures. Professor CUSHING. (P.B.B.H.) *Once a week, first and second half-year.* 32

Clinical lectures given contemporaneously at the M.G.H. and B.C.H. Associate Professor PORTER and Assistant Professor GREENOUGH (M.G.H.) or Associate Professor NICHOLS and Assistant Professors LOTHROP and BLAKE (B.C.H.). *Once a week, first and second half-year.* 32

(During April of the third year, four afternoon exercises will be devoted to the general surgery of children. Dr. JAMES S. STONE. (H.M.S. and Ch.H.) During May of the third year, four morning and eight afternoon exercises will be devoted to genito-urinary surgery. Assistant Professor HUGH CABOT. (H.M.S. and M.G.H.)

Case teaching. Assistant Professor BLAKE. (H.M.S.) *Once a week, beginning February 1st.* 16

Recitations. Assistant Professors LOTHROP and GREENOUGH. (H.M.S.) *Once a week, first half-year.* 16

Exercises in sections. Each student has forty-eight exercises of three hours each. 144

Orthopedic Surgery

ROBERT W. LOVETT, M.D., *Assistant Professor of Orthopedic Surgery.*

ELLIOTT G. BRACKETT, M.D., *Associate in Orthopedic Surgery.*

AUGUSTUS THORNDIKE, M.D., *Associate in Orthopedic Surgery.*

ROBERT SOUTTER, M.D., *Instructor in Orthopedic Surgery.*

ROBERT B. OSGOOD, M.D., *Instructor in Orthopedic Surgery.*

Third Year. — Orthopedic Surgery is taught in the first half of the third year and consists of a series of lectures and demonstrations at the Medical School, and of clinical exercises at the Children's and Massachusetts General Hospitals.

Fourth Year. — For a description of the fourth-year courses offered by this department, see page 60.

THIRD YEAR

HOURS

Lectures and demonstrations. Orthopedic Surgery. Assistant Professor LOVETT, and Drs. BRACKETT, A. THORNDIKE, SOUTTER, and OSGOOD. (H.M.S. and Ch.H.) *Every other week, second half-year.* 8

Roentgenology

WALTER J. DODD, M.D., *Instructor in Roentgenology.*

SAMUEL W. ELLSWORTH, M.D., *Assistant in Roentgenology.*

PERCY BROWN, M.D., *Assistant in Roentgenology.*

ARIAL W. GEORGE, M.D., *Assistant in Roentgenology.*

GEORGE W. HOLMES, M.D., *Assistant in Roentgenology.*

ALFRED LUGER, M.D., *Assistant in Roentgenology.*

Lectures and demonstrations in the use of the Roentgen Ray will be given in connection with all of the departments of the School when such instruction is desired by the head of the individual department. Arrangements can be made for such instruction with the Instructor in Roentgenology.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 55.

Obstetrics and Gynaecology

CHARLES M. GREEN, M.D., *Professor of Obstetrics and Gynaecology.*

WILLIAM P. GRAVES, M.D., *Professor of Gynaecology.*

FRANKLIN S. NEWELL, M.D., *Assistant Professor of Obstetrics and Gynaecology.*

MALCOLM STORER, M.D., *Instructor in Gynaecology.*

ERNEST B. YOUNG, M.D., *Instructor in Gynaecology.*

HOWARD T. SWAIN, M.D., *Instructor in Obstetrics.*

JAMES R. TORBERT, M.D., *Assistant in Obstetrics.*

NATHANIEL R. MASON, M.D., *Assistant in Obstetrics and Gynaecology.*

ROBERT L. DENORMANDIE, M.D., *Assistant in Obstetrics.*

HENRY T. HUTCHINS, M.D., *Assistant in Gynaecology.*

ROBERT M. GREEN, M.D., *Assistant in Obstetrics and Gynaecology.*

RALPH L. REYNOLDS, M.D., *Alumni Assistant in Obstetrics.*

RICHARD G. WADSWORTH, M.D., *Fellow in Gynaecology.*

OBSTETRICS

Third Year.—Instruction is given by lectures, recitations, conferences, and clinical teaching. Students are required to take charge of at least six cases of labor, under supervision and instruction, to care for their patients during the convalescence, and to make full written reports of the cases. Many of these reports are read at the conferences and discussed by the class and the instructors.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 61.

SECOND YEAR

HOURS

Lectures. Professor GREEN. (H.M.S.) *Once a week, second half-year.*
16

THIRD YEAR

Lectures, recitations, and conferences on Obstetrics. Professor GREEN and assistants. (H.M.S.) *Twice a week, first half-year. Once a week, second half-year.*
48

Practical instruction in Clinical Obstetrics. Drs. SWAIN, TORBERT, MASON, DENORMANDIE, R. M. GREEN, and REYNOLDS. *Throughout the year.*

GYNÆCOLOGY

Third Year.—Instruction is given by lectures, recitations, and clinical teaching. Clinics are held in the out-patient departments of the Boston City Hospital, the Boston Dispensary, and the Free Hospital for Women, and the student is instructed in diagnosis, and in the treatment of ambulatory cases.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 61.

THIRD YEAR

HOURS

Lectures or recitations. Professors GREEN and GRAVES, Assistant Professor NEWELL, and Drs. STORER and YOUNG. (H.M.S.) *Every other week, second half-year.*
8

Clinical exercises. PROFESSOR GRAVES (F.H. for W.), DR. STORER (B.D.), and Drs. MASON and R. M. GREEN (B.C.H.). *In sections, throughout the year. Each student attends six exercises.* 18

Pediatrics

THOMAS MORGAN ROTCH, M.D., *Professor of Pediatrics.*
JOHN L. MORSE, M.D., *Associate Professor of Pediatrics.*
MAYNARD LADD, M.D., *Instructor in Pediatrics.*
CHARLES H. DUNN, M.D., *Instructor in Pediatrics.*
HENRY I. BOWDITCH, M.D., *Clinical Instructor in Pediatrics.*
EDWIN H. PLACE, M.D., *Clinical Instructor in Pediatrics.*
FRITZ B. TALBOT, M.D., *Clinical Instructor in Pediatrics.*
ARTHUR A. HOWARD, M.D., *Clinical Instructor in Pediatrics.*
PHILIP H. SYLVESTER, M.D., *Assistant in Pediatrics.*
RICHARD M. SMITH, M.D., *Assistant in Pediatrics.*
JAMES H. YOUNG, M.D., *Assistant in Pediatrics.*
HENRY F. KEEVER, M.D., *Assistant in Pediatrics.*
LOUIS W. GILBERT, M.D., *Fellow in Pediatrics.*
WILLIAM W. HOWELL, M.D., *Fellow in Pediatrics.*
HAROLD A. GALE, M.D., *Fellow in Pediatrics.*
THEODORE W. ELY, M.D., *Fellow in Pediatrics.*
WILLARD S. PARKER, M.D., *Fellow in Pediatrics.*

Third Year.—The material for instruction is drawn from the Infants' Hospital, the Children's Hospital, the Massachusetts Babies' Hospital, the South Department of the Boston City Hospital, and from the Children's Departments of the Massachusetts General Hospital and the Boston Dispensary. Lectures are given on such selected topics as development, living anatomy, the dietetics of early life, diphtheria, the exanthemata, and the gastro-enteric diseases, preparatory for the clinical teaching. Clinical lectures are given at the Children's Hospital and at the Infants' Hospital; and the students are required to take an active part in the examination and discussion of the cases. Sectional teaching at the bedside both at the Children's and Infants' Hospitals is given throughout the year and comprises a large proportion of the year's instruction. Bedside instruction and clinical lectures are given at the South Department of the Boston City Hospital, where the students are shown and examine cases of diphtheria, the acute exanthemata and any other contagious diseases which happen to be in the hospital. According as the opportunity arises, the students are instructed in the technique of intubation. By means of the very large amount of Pediatric material in the contagious wards, the general subject of Pediatrics as connected with contagious diseases is

especially explained and illustrated. Exercises in case teaching are given in the latter part of the year preparatory for the examination. At the Children's Hospital the students are given instruction in lumbar puncture and in the serum examinations and other diagnostic methods. In all clinical and sectional teaching especial attention is paid to clinical therapeutics.

	THIRD YEAR	HOURS
Lectures. Professor ROTCH and assistants. (H.M.S.)	<i>Once a week throughout the year.</i>	32
Clinical lectures. Professor ROTCH and assistants. (Ch.H.)	<i>Once a week throughout the year.</i>	32
Section Teaching. (Ch.H., I.H., and S.D.B.C.H.)	<i>Throughout the year. Each student attends twenty-four exercises during the year.</i>	72

Dermatology and Syphilis

ABNER POST, M.D., *Professor of Syphilis.*

CHARLES J. WHITE, M.D., *Assistant Professor of Dermatology.*

C. MORTON SMITH, M.D., *Instructor in Syphilis.*

FREDERICK S. BURNS, M.D., *Instructor in Dermatology.*

E. LAWRENCE OLIVER, M.D., *Assistant in Dermatology.*

DERMATOLOGY

Third Year. — A course of clinical lectures, clinical exercises, and half-hour examinations and quizzes extending throughout the year.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 62.

	SECOND YEAR	HOURS
Clinical Lectures. Assistant Professor WHITE. (M.G.H.)	<i>Once a week, second half-year.</i>	16

THIRD YEAR

Lectures on the Anatomy and Therapeutics of the Skin. (Illustrated.)		
Assistant Professor WHITE. (H.M.S. and M.G.H.)	<i>Every other week, second half-year.</i>	8
Section work (clinical exercises). Drs. BURNS and OLIVER. (M.G.H.)	<i>Each student attends twelve exercises.</i>	36

SYPHILIS

Third Year. — Lectures and clinical instruction are given at the Boston Dispensary.

THIRD YEAR	HOURS
Lectures. Professor Post. (H.M.S.) <i>Every other week, second half-year.</i>	8
Clinical lectures. Professor Post and Dr. SMITH. (B.D.) <i>Once a week, September 23 to November 19.</i>	8
Clinical exercises. Professor Post and Dr. SMITH. (B.D.) <i>Each student attends six exercises, in sections.</i>	18

Diseases of the Nervous System

The Department of Diseases of the Nervous System is composed of the sub-departments of Neuropathology, Neurology, and Psychiatry.

ELMER E. SOUTHARD, M.D., *Bullard Professor of Neuropathology.*

EDWARD W. TAYLOR, M.D., *Assistant Professor of Neurology.*

HERMAN M. ADLER, M.D., *Assistant Professor of Psychiatry.*

EDWARD COWLES, M.D., LL.D., *Instructor in Psychiatry.*

GEORGE A. WATERMAN, M.D., *Instructor in Neurology.*

GEORGE T. TUTTLE, M.D., *Clinical Instructor in Psychiatry.*

F. ROBERTSON SIMS, M.D., *Assistant in Neuropathology.*

JAMES B. AYER, M.D., *Assistant in Neuropathology and Neurology.*

GEORGE CLYMER, M.D., *Assistant in Neurology.*

NEUROPATHOLOGY

Second Year.—The course consists of lectures, laboratory work, and demonstrations, with tests, review exercises, and quizzes as required. A brief review is given of the anatomy required for grasping the pathological physiology of the nervous system. The lectures introduce conceptions of value for the third-year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. The laboratory work is mainly histopathological, dealing with the inflammatory reactions, the classical degenerations, and (in brief) with important entities such as general paresis of the insane and tabes dorsalis. To illustrate the simpler physiological applications of the work, special demonstrations are given to the students in groups at certain State institutions.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 52.

SECOND YEAR	HOURS
Lectures. Professor SOUTHARD and assistants. <i>Afternoons in December.</i>	12
Laboratory work. Professor SOUTHARD and assistants. <i>Two hours daily, afternoons in December.</i>	24

Written and practical tests. Professor SOUTHARD and assistants. *After-
noons in December.* 9

Demonstrations at State institutions, voluntary. Special.

Neurology

Second Year.—Clinical lectures are given at the Massachusetts General Hospital to the entire class, once a week throughout the second year. The object of the course is to give the student a first hand knowledge of the principles of diagnosis and treatment of diseases of the nervous system. The general plan of instruction is (a) Review of the anatomy of the nervous system essential to diagnosis of organic diseases; lectures and demonstrations. (b) Pathological anatomy in its relation to diagnosis; demonstrations of stained specimens and photographs. (c) Study of cases as they present themselves at the Out-Patient Department of the Hospital and in the wards.

Third Year.—At different times throughout the third year, clinical lectures on Neurology are given at the Massachusetts General Hospital. The class has also an opportunity to partake in the practical work in Neurology in whole sections. Short examinations and conferences are held at intervals during the year. Dr. JAMES J. PUTNAM will give a series of lectures in the spring term on the Principles and Practice of Psycho-Analysis.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 62.

SECOND YEAR

HOURS

Clinical lectures. Assistant Professor TAYLOR. (M. G. H.) *Once a week,
second half-year.* 16

THIRD YEAR

Clinical lectures. Assistant Professor TAYLOR. (M. G. H.) *Once a week,
November 19 to December 23 and during May.* 8

Section teaching. Each student attends 12 exercises in Neurology and
and Psychiatry. 36

PSYCHIATRY

THIRD YEAR

During January, February, March, and April a clinical lecture will be given once a week at the Psychopathic Hospital. The different forms of mental disease will be discussed and patients exhibiting the symptoms under consideration will be presented.

During the second half-year a series of eight lectures will be given at the Harvard Medical School. This course is designed to present to the students

the modern points of view in regard to insanity and the psychoneuroses and the mental diseases of adolescence.

Supplementary instruction is given to the class in small sections in the wards and Out-Patient Department of the Psychopathic Hospital. Each student will examine and report on at least one case of insanity or mental defect.

THIRD YEAR	HOURS
Lectures. Assistant Professor ADLER. (H. M. S.) <i>Every other week, second half-year.</i>	8
Clinical lectures. Assistant Professor ADLER. (P. H.) <i>Once a week, January, February, March, and April.</i>	16
Section teaching. Each student attends 12 exercises in Neurology and Psychiatry.	36

Ophthalmology

MYLES STANDISH, M.D., S.D., *Williams Professor of Ophthalmology.*

ALEXANDER QUACKENBOSS, M.D., *Instructor in Ophthalmology.*

HENRY H. HASKELL, M.D., *Instructor in Ophthalmology.*

FRED M. SPALDING, M.D., *Instructor in Ophthalmology.*

GEORGE S. DERBY, M.D., *Assistant in Ophthalmology.*

WILLIAM N. SOUTER, M.D., *Fellow in Ophthalmology.*

Third Year.—Instruction consists of lectures at the Medical School and of clinical exercises devoted to diagnostic methods, diagnosis, and treatment at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 64.

THIRD YEAR	HOURS
Lectures. Professor STANDISH. (H.M.S.) <i>Every other week, first half-year.</i>	8
Clinical exercises. Drs. QUACKENBOSS, HASKELL, DERBY, and SPALDING. (E. and E.I.) <i>In sections, first half-year. Twelve exercises for each student.</i>	36

Otology

——, *Walter Augustus Lecompte Professor of Otology.*

EUGENE A. CROCKETT, M.D., *Assistant Professor of Otology.*

PHILIP HAMMOND, M.D., *Instructor in Otology.*

WILLIAM F. KNOWLES, M.D., *Assistant in Otology.*

ALFRED M. AMADON, M.D., *Assistant in Otology.*

DAVID H. WALKER, M.D., *Assistant in Otology.*

GORDON BERRY, M.D., *Assistant in Otology.*

CALVIN B. FAUNCE, Jr., M.D., *Assistant in Otology.*

Third Year.—Lectures are given at the Medical School, and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 64.

THIRD YEAR

HOURS

Lectures. Assistant Professor CROCKETT. (H.M.S.) *Every other week, first half-year.* 8

Clinical exercises in sections. (E. and E.I.) *Every student attends twelve exercises, second half-year.* 18

Laryngology and Rhinology

ALGERNON COOLIDGE, Jr., M.D., *Professor of Laryngology.*

J. PAYSON CLARK, M.D., *Instructor in Laryngology.*

FREDERIC C. COBB, M.D., *Instructor in Laryngology.*

JOSEPH L. GOODALE, M.D., *Instructor in Laryngology.*

ROCKWELL A. COFFIN, M.D., *Instructor in Laryngology.*

HARRIS P. MOSHER, M.D., *Instructor in Laryngology.*

HARRY A. BARNES, M.D., *Assistant in Laryngology.*

GEORGE H. WRIGHT, D.M.D., *Assistant in Laryngology.*

JOHN H. BLODGETT, M.D., *Fellow in Laryngology.*

D. CROSBY GREENE, M.D., *Fellow in Laryngology.*

Third Year.—Instruction consists of lectures and demonstrations, and of training in the use of instruments. The entire class has twenty-four lectures during the second half-year. For the practical work at the Massachusetts General Hospital, the Boston City Hospital, and the Boston Dispensary, the class is divided into small sections.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 65.

THIRD YEAR

HOURS

Lectures. Professor COOLIDGE, assisted by Drs. GOODALE, MOSHER, and WRIGHT. (H.M.S.) *Every other week, first half-year.* 8

Clinical exercises. Professor COOLIDGE, and Drs. CLARK, MOSHER, BARNES, GREENE (M.G.H.), COFFIN, BLODGETT (B.C.H.), and COBB (B.D.). *In sections, second half-year. Twelve exercises for each student.* 18

FOURTH-YEAR ELECTIVES

The electives of the fourth year are given as half-courses, quarter-courses, and full-courses. A half-course occupies the entire day for one month (the all-day plan) or the forenoons or the afternoons for two months (the half-day plan). Each half-course has a value of 125 hours. Quarter-courses occupy half the day for one month. Two quarter-courses equal a half-course. Eight half-courses are necessary to satisfy the requirement of one thousand hours of work demanded in the fourth year.

Students wishing to specialize in any particular branch of medical study may elect more than one of the half-courses offered in a given subject, but no student will be allowed to devote his whole year to one subject without the consent of the head of the department concerned.

When a student's research work in an elective is necessarily prolonged beyond the time elected for that subject, he will be allowed, with the permission of the Administrative Board, to make such changes in his electives as will enable him to finish his research work, provided the time required does not extend beyond the school year.

The final choice of electives must be left at the Dean's office on or before June 1. *No changes in electives will be allowed after the final assignments are made.*

The Faculty reserves the right to modify the selection of the courses chosen by any student. The *order* in which a student's electives are arranged must be determined by the Secretary of the Faculty.

The nature of the examinations shall be determined by each department subject to the approval of the Faculty. The student's credit may be based on his daily written record of work, and on a practical or written examination at the end of his course, or upon all combined. The mark assigned must be sent immediately to the Dean's office.

No student may select a fourth-year elective, covering a subject still owing in the work of the first three years, without the consent of the head of the Department in writing.

FOURTH-YEAR ELECTIVES ARRANGED UNDER
DEPARTMENTS

ANATOMY.

[*Under this Heading are included the Courses in Anatomy, Comparative Anatomy, Embryology, and Histology.*]

Anatomy I. Half-courses, afternoons, October and November, February and March.

This is a course in general applied and surgical anatomy designed to emphasize and explain such parts of general anatomy as are of practical

importance. Less important details are studied briefly or omitted altogether, according to their deserts, but ample opportunity is given to the student who desires it to review the chief facts of general anatomy or to pay especial attention to regions in which he is interested.

Instruction is by demonstrations, dissection, the study of frozen sections, and specimens and informal quizzes. The greatest importance is attached to the verification by the student in his own dissection of the facts presented by the instructor.

To enable the course to be satisfactorily adjusted to courses in other departments, a limited number of students may be permitted, on consultation with the instructor, to take one month with the first section and the other month with the second section.

N. B. — No one can take this course who has not passed his first-year anatomy.

Anatomy 2. Anatomy of Higher Vertebrates. Professor MINOT and assistants. Whole course, first half-year, at hours to be arranged with the instructors.

The object of this course is to give the student an exact knowledge of the anatomy of a few mammals and birds as a foundation for research in Anatomy and Embryology, or for experimental work in Physiology or Pathology.

A small number of mammals, including a carnivore, rodent, and ungulate, and one or two birds will be studied. Each student will be required to make thorough dissections of each animal and to prepare sections of the most important organs. There will be lectures upon the general principles of comparative anatomy.

College courses in the morphology of animals, especially of vertebrates, are a desirable preparation for this work.

Anatomy 3. Advanced Vertebrate Embryology. Assistant Professor LEWIS. Whole course, half-days for four months, or all day for two months, second half-year.

An elementary knowledge of embryology, such as may be obtained from Course 1, is required. Course 5, offered by the Department of Zoölogy of Harvard College, or an equivalent course, is recommended.

In this course sixteen hours per week (at times chosen by the student) are to be spent in laboratory work. There are no lectures, but at appointed times the students meet for directions and for a thorough discussion of the specimens studied. The methods of making graphic and wax reconstructions will be taught, together with the ways of preparing drawings for publication. Reconstructions by both methods, and a certain number of drawings suitable for reproduction, will be required.

The *Manual of Human Embryology*, edited by Keibel and Mall, will be used as a text-book and original publications will be consulted. At the discretion of the instructor students may have access to the extensive embryological collection and to the collection of models, many of which were made in this laboratory.

Anatomy 4. Advanced Histology. Assistant Professor BREMER. Whole course, second half-year, at hours to be arranged with the instructor.

This course is intended to supplement the course in the Anatomy of Higher Vertebrates. The genesis as well as the adult histology of the various parts and organs is studied, and special stress is laid on their differences, developmental and structural, in the animals chiefly used in experimental medicine and animal economics. Students will also be required to master the principal technical methods used in Histology.

Anatomy 5. Half-course, afternoons, October and November. Professor MINOT. Structure and development of the eye, ear, and nasopharynx.

Anatomy 6. Half-course, afternoons, October and November. Professor MINOT. Structure and development of the urogenital system.

Anatomy 7. Half-course, afternoons, December and January. Professor MINOT. Development and histology of the nervous system.

PHYSIOLOGY.

Physiology 1. Half-courses, forenoons, afternoons, or all day, first half-year; afternoons, second half-year.

Detailed study in special subjects in physiology. Such study will include preparation of bibliographies, reading of classical papers, repetition of important experiments, and reports on work accomplished.

Physiology 2. Investigation. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students properly qualified, who are willing to spend sufficient time in research, will be welcomed into the laboratory and given problems to work upon. During the conduct of their investigations they will receive the counsel and guidance of other investigators working with them.

Following are some suggestions for research which may readily be conducted in the Laboratory:—

Quantitative studies of human sensory and motor thresholds under various conditions, including the effects of stimulants and narcotics; the effects of toxins and poisons on the nervous system in experimental animals; the excitability of the “centers” of the medulla under various

conditions. Studies in the physiology of the central nervous system. Studies of problems in the movements of the stomach and intestines, and in the activities of glands of internal secretions.

COMPARATIVE PHYSIOLOGY.

Comparative Physiology 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students may elect work in any field of physiology. It is to be presumed that such students desire additional work in physiology to fit them for some special field of medicine, for example, the diseases of the nervous system; or they may wish to pursue physiology, pathology, or some other biological science as a profession. They will be received into the research laboratories of the department, and will carry on their studies with the personal assistance of Professor PORTER. The work will consist of fundamental experiments, the study of accessory data, and the reading of selected original investigations. The course is open to qualified persons not students in the Medical School.

Comparative Physiology 2. Physiology of the eye, ear, and upper respiratory tract. Afternoons, except Saturday, in December and January.

BIOCHEMISTRY.

Biochemistry 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

BACTERIOLOGY.

Bacteriology 1. Half-courses, forenoons, afternoons, or all day, second half-year.

These electives will be of five kinds, including (a) instruction in methods of diagnosis, depending upon bacteriological procedures; (b) instruction in methods of bacteriological diagnosis in use in health board laboratories, including the examination of waters and soils; (c) instruction in methods of opsonic-index work, with practical application; (d) special studies of spirochaetes and trypanosomes (open during both the first and second half-years, but should be taken for at least two months); (e) research work in any direction for which the student may be fitted.

Longer courses may include one or the other of these, together with a limited piece of research work.

Note: Students are advised not to take all-day courses in this subject.

PATHOLOGY.

Pathology 1. Professor F. B. MALLORY. Half courses, all day, preferably second half-year.

This course is given in the pathological laboratory of the Boston City Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Pathology 2. Assistant Professor J. H. WRIGHT. Half-courses, all day, second half-year.

This course is given in the pathological laboratory of the Massachusetts General Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Each course limited to four men.

Pathology 3. Assistant Professor KARSNER. Half-courses, mornings or afternoons, second half-year.

This course is given in the laboratory of pathology, H.M.S., and is open to men acceptable to the head of the department, who wish to take up research work in pathological anatomy or in experimental pathology. The problems will be arranged by consultation between students and the head of the department. Not more than four men will be received in any one course.

Pathology 4. Professor W. T. COUNCILMAN.

This course will consist in following out and assisting in the general work of the laboratory of the Peter Bent Brigham Hospital, emphasis being placed upon the inter-relation of clinical and pathological work. One student of the fourth year will be taken into the laboratory from October first to February first, giving all his time to the work. From February first two students will be received for periods of not less than two months.

COMPARATIVE PATHOLOGY.

Comparative Pathology 1. Half-course, afternoons, October and November, first half-year. Laboratory work, lectures and conferences. Attendance is limited to ten students.

The laboratory work will consist in a study of such infectious diseases of man and the higher animals as are reproducible at will upon the smaller animals. Each disease taken up will be studied as far as possible in the living animal with reference to the cellular reactions and the antibodies of the blood, and the secretions and excretions. The tissue changes will be studied histologically, and the chief biological and pathogenic characters of the microorganisms investigated. At the same time attention will be given to changes in the character of the diseases due to different degrees of artificially induced immunity.

Comparative Pathology 2. Research. Students who have taken Course 1 or its equivalent will be admitted as research students to work upon some problem in experimental and comparative pathology for which adequate facilities can be provided. Such work may be undertaken at the convenience of the student.

NEUROPATHOLOGY.

Neuropathology 1. Half-courses, forenoons, afternoons, or all day, throughout the year, preferably the second half-year.

The case-method is followed. The report of a selected case will be worked up by the student (as if for publication), based upon the personal employment of approved neuropathological methods.

Limited to two during a given month. Consultation with the instructor in advance will secure the choice of a case in line with the student's later special work.

Neuropathology 2. Half-courses, forenoons, afternoons, or all day throughout the year.

Clinico-pathological methods in neurology and psychiatry and allied problems of internal medicine and surgery. Students taking this course for several months may, with the consent of the authorities, serve as clinical clerks or laboratory externes in the Psychopathic Hospital or, under special conditions, in other State institutions. Students will be permitted to attend staff-conferences at the institutions where their work is carried on. They may be required to submit reports or theses concerning observations made.

The clerkships and externships are limited to two in a given month. The instructor should be consulted in advance.

SEMINARY IN DISEASES OF THE NERVOUS SYSTEM.

A voluntary conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry and for graduate students taking allied courses has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by students.

PREVENTIVE MEDICINE AND HYGIENE.

Preventive Medicine and Hygiene 1. Half-course, afternoons, second half-year.

This course will consist in laboratory instruction, sanitary excursions, and, in part, of special research. The laboratory instruction will comprise analysis of air, soil, water, adulterations of foods, milk and its relation to the public health, investigations of disinfectants, studies in immunity, vaccination, the transmission of the communicable diseases, and epidemiology.

Each course limited to ten men. Students must see the instructor in charge before enrolling in this course.

PHARMACOLOGY.

Pharmacology. Half-courses, forenoons, afternoons or all day, first half-year.

MEDICINE.

Medicine 1. Full courses, all day, throughout the year.

This work will be given at the Massachusetts General Hospital. Each half-course will be limited to twelve students. Students will serve as clinical clerks in the wards of the hospital and will have opportunity to systematically study the patients. Work in the wards will be supplemented by work in the Out-patient Department. Ample facilities will be furnished for the laboratory investigation of the patients. This course will be given under the supervision of Professor EDSALL and Assistant Professor CABOT. The courses will be given for two months each continuously, beginning October 1st, December 1st, February 1st, and April 1st. Each student electing the course must take it for at least two consecutive months unless he has already had a course in Medicine 2, in which case he may take one or more further months in this course.

Medicine 2. Full courses all day throughout the year.

This work will be given at the Peter Bent Brigham Hospital. Each half-course will be limited to eight students. Students will serve as clinical clerks in the wards of the Hospital and will have opportunity to

study systematically the patients. Work in the wards will be supplemented by work in the Out-patient Department. Ample facilities will be furnished for laboratory investigation of patients. This course will be given under the supervision of Professor Christian and Dr. Frothingham. The courses will be given for two months each, beginning October 1st, December 1st, February 1st, and April 1st. Each student electing the course must take it for at least two consecutive months unless he has already had a course in Medicine 1, in which case he may take one or more additional months in this course.

TROPICAL MEDICINE

Tropical Medicine 1. Tropical Protozoölogy. Quarter-course, mornings, November.

The course in Protozoölogy will include a general discussion of the morphology and life history of the more important human protozoan parasites, such as the amoebae, flagellata (trypanosomes, the parasites of kala azar and oriental sore), sporozoa (malarial parasites) and ciliata. Their relations to their definitive and to intermediate hosts will also be discussed, together with phenomena of immunity. Methods for the cultivation of certain parasites and suitable procedures for collecting, staining, and mounting will be discussed as far as possible in the time allotted.

Tropical Medicine 2. Tropical Pathology. Quarter-course, afternoons, November.

This course will include the study of the macroscopic and histological lesions of as many of the important tropical diseases as it is practicable to consider in the time allotted to the subject.

Tropical Medicine 3. Tropical Bacteriology. Quarter-course, afternoons, January.

This course will include the identification of the etiological factor and the diagnosis of the infection by laboratory methods, such as cultures, serum reactions, and the inoculation of animals in as many of the important tropical diseases as the time allotted to the subject will allow for.

Tropical Medicine 4. Tropical Entomology. Quarter-course, afternoons, February.

This course will include general lectures on the structure and classification of the Arthropoda, followed by a more detailed account of the Arthropoda known to be concerned and likely to be concerned in the transmission of human and animal diseases or in the inflictions of local injuries and physiological disturbances.

Laboratory work and demonstrations will also constitute an important feature and will provide, as far as is possible during the time allotted, for training in the dissection of insects, in the principal methods of studying their life histories and habits and in their identification by means of dichotomic tables and from technical descriptions.

Tropical Medicine 5. Clinical Laboratory Work in Tropical Diseases. Quarter-course, afternoons, April.

This course will be practical and will cover methods of obtaining and the technic of examination of materials from the more important tropical infections where a diagnosis may be made or aided by the microscope.

Tropical Medicine 6. General Course in Tropical Medicine. Quarter-course, mornings, February.

Provided arrangements for clinical work in tropical diseases are completed by that time, this course will consist of lectures, laboratory work, and bedside demonstrations upon as many of the important tropical diseases as it is possible to consider in the time allotted to the course.

A course in Helminthology may be obtained by special arrangement.

ROENTGEN RAY.

Roentgen Ray 1. Half-course, all day, throughout the year.

A complete course will be given in the application of the Roentgen Ray in diagnosis and therapeutics. Mornings from 9 A.M. to 12 M. at the Massachusetts General Hospital and Carney Hospital, Drs. WALTER J. DODD and PERCY BROWN. Afternoons from 3 to 5 P.M. at the Children's Hospital, Dr. ARIAL W. GEORGE.

Roentgen Ray 2. Quarter-courses, mornings, throughout the year.

This course is practically the same as that given in the mornings in the above course.

PEDIATRICS.

Pediatrics 1. Half-courses, all day, throughout the year.

The work will consist of instruction in the wards and out-patient departments of the Children's Hospital, of the Infants' Hospital, of the Children's Department of the Massachusetts General Hospital, in the contagious wards of the South Department of the Boston City Hospital, at the Children's Tubercular clinic of the Burroughs Place Dispensary, at the Massachusetts Babies' Hospital, and in the Children's wards and out-patient department of the Boston Dispensary. The students will be assigned to the various clinics by the Professor of Pediatrics, and the work will be under his supervision. The mornings will be taken up with teaching in the various

wards and out-patient departments. There will be given two lectures on the significance of the ear in early life by Dr. CROCKETT in the wards of the Infants' Hospital. Especial instruction will be given at the Massachusetts Babies' Hospital in the examination and preparation of milk modifications in connection with substitute feeding, and here instruction will also be given in connection with the subject of wet nurses.

Four hours in each week will be spent at the South Department. Here instruction in general Pediatrics as connected with contagious diseases will be demonstrated and whenever possible the technique of intubation will be shown.

Two lectures on preventive medicine, in connection with the feeding of infants, will be given at the Milk and Baby Hygiene Stations.

Each student will have assigned to him a case in the wards of the Children's Hospital for the purpose of making a study of that especial disease. Each student will also have cases assigned to him on two afternoons of each week, when in the early part of the afternoon instruction in physical examination will be given by the various instructors and in the latter part of the afternoon these cases will be discussed with one of the senior members of the Department. Instruction will also be given in the laboratory of the Children's Hospital in clinical work connected with lumbar puncture and with the examination of the spinal fluid, blood and urine.

Dr. GEORGE will give practical instruction by means of Roentgen plates in the normal development of early life and in the more important diseased conditions. The class will be taken to a model farm, where everything practical pertaining to the milk supply for infants and young children will be taught. In connection with this, practical instruction will be given in a research milk laboratory in the writing of prescriptions and in the routine of laboratory work.

The examination will be an oral one, held by the Professor of Pediatrics.

SURGERY.

The electives offered by the Department of Surgery consist of half-courses (occupying the whole day for one month or the mornings of two months) and quarter-courses (either mornings or afternoons for one month). They are so arranged that they may be themselves combined in different groups or taken in combination with quarter-courses offered by other departments. No student will be permitted to take more than four half-courses in surgery without special permission of the head of the department.

1	2	3	4	5	6	7	8	9	10
All day. 1 month. P.B.B.H. Dresser. Practical Surgery. Oct. to May.	All day 1 month. B.C.H. Relief. Dresser. Practical Surgery. Oct. to May.	Forenoons. 1 month. M.G.H. Observation. Oct. to May.	Forenoons. 1 month. B.C.H. Voluntary Assistant. Oct., Nov., Feb., Mar.		Forenoons. 1 month. B.C.H. G. U. Sur- gery. Thorndike Feb. to May.	Forenoons. 1 month. M.G.H. G. U. Sur- gery. Cabot. Oct. to Jan.	All day. 1 month. B.C.H. Labo- ratory Surgical Pathology. Nichols and Loder. Nov., Dec., Feb., Mar. 2 men only.		Forenoons. 2 months. M.G.H. Clinical Surgical Pathology. Oct. to May.
				Afternoons. 1 month. Operative Surgery. H.M.S. Dec., Jan., Apr., May.				Afternoons. 1 month. Children's Hospital. Wards and O.P.D. Oct., Nov., Feb., Mar.	
Half- course.	Half- course.	Quarter- course.	Quarter- course.	Quarter- course.	Quarter- course.	Quarter- course.	Half- course.	Quarter- course.	Half- course.

Surgery 1. Clinical Clerk Service at the Brigham Hospital. Half-courses, all day, for one month, throughout the year. Peter Bent Brigham Hospital. Dr. HARVEY CUSHING.

Students will serve as assistants to the hospital staff in the routine ward, operating room and laboratory work of the hospital. The course is limited to six students and preference will be given to those taking two consecutive months.

Surgery 2. Practical Work in Surgery. Half-courses, all day, for one month, throughout the year. Boston City Hospital and Relief Station. Dr. J. BAPST BLAKE.

The student will be assigned as a "dresser" and will be under the hospital administration. He will be given opportunity to take histories, make examinations and diagnoses, make dressings, assist at operations, and administer anesthesia. He will obtain abundant experience in traumatic surgery, fractures and emergency cases, and will follow the after-care and convalescence of such cases as come under his charge. He will receive instruction and will be examined from time to time in the performance of his duties by the instructor.

Surgery 3. Observation of Surgical Cases. Quarter-courses, forenoons, for one month, throughout the year. Massachusetts General Hospital. Dr. C. A. PORTER.

The student will be given opportunity to study the surgical material of the hospital. Instruction will be given in case-taking, examination of patients, diagnosis, surgical treatment, and the after-care of surgical patients. Laboratory and X-ray methods of diagnosis will be demonstrated. Operations on cases previously examined by the class will be attended and the pathological material obtained from operations and autopsies will be studied. Collateral reading on surgical subjects will be required.

No student will be allowed to repeat this course except with the special permission of the head of the department.

Surgery 4. Quarter-course, forenoons, for one month, given in October, November, February, and March. Boston City Hospital. Dr. J. B. BLAKE.

The student will be assigned to the first surgical service of the Boston City Hospital as a "voluntary assistant" and will be under the hospital administration. He will be given practical work for two hours each morning in the wards and operating rooms, and the remaining time will be spent in the study or observation of special surgical cases or problems.

Surgery 5. Operative Surgery. Quarter-course, afternoons, for one month, December, January, April, and May. Dr. HARVEY CUSHING and assistants. Harvard Medical School, Laboratory of Operative Surgery and Laboratory of Surgical Research.

Instruction will be given by lecture and by demonstration on the cadaver in the classical and important operations and operative procedures, which will then be performed by the student under the supervision of the instructor. An extra charge will be made for material used in this course.

Surgery 6. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, February, March, April, and May. Dr. PAUL THORNDIKE. Boston City Hospital.

Instruction will consist of ward work, taking of histories, the witnessing of and assisting at operations, the reporting of the progress of cases and seeing the end results. Conferences with the students will be held from time to time.

Surgery 7. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, October to January, inclusive. Dr. HUGH CABOT. Massachusetts General Hospital.

The student will be assigned as assistant in the clinic and will take part in the routine work, case-taking, examination of patients, diagnosis and treatment. Operations and the after-care of major operative cases will be followed in the wards. Instruction will be given in cystoscopy and in laboratory methods of diagnosis. (Courses 5 and 6 may be taken together as a half-course in Genito-Urinary Surgery.)

Surgery 8. Half-courses, all day except Saturdays and Sundays, for one month, November, December, February, and March. Associate Professor E. H. NICHOLS and Dr. H. B. LODER. Boston City Hospital and Laboratory of Surgical Pathology.

This course will include ward visits, operations, etherization, microscopy and examination of pathological specimens from operations at the Boston City Hospital. The afternoons will be spent at the Laboratory of Surgical Pathology at the Harvard Medical School. The instruction will include experimental operations along pathological lines suggested by the instructors, with compilation of literature and interpretation of operative results. Limited to two men. Suitable students will be permitted to repeat the course. With the special permission of the instructor this course may be taken by two additional men as a quarter-course, occupying the afternoons of one month.

Surgery 9. Quarter-courses, afternoons, for one month, October, November, February, and March. Dr. JAMES S. STONE and assistant surgeons of the Children's Hospital.

The general surgical diseases of children, fractures, infections, hernia, congenital malformations, etc. The student will be assigned cases in the surgical out-patient department and in the wards of the hospital for examination and diagnosis. Treatment will be discussed with the instructor. Opportunity will be given to qualified students to do practical work as dressers, Monday, Tuesday, Wednesday and Saturday afternoons in the out-patient department; Thursday and Friday afternoons the class will meet in the wards and operating rooms of the hospital.

Surgery 10. Clinical Surgical Pathology. Half-courses, forenoons, for two months, throughout the year. Dr. W. F. WHITNEY and Dr. HARRY F. HARTWELL. Massachusetts General Hospital.

The course will be devoted to the study of pathological specimens from the surgical clinic, with especial reference to the use of the microscope in immediate diagnosis. Opportunity will be offered for the systematic study of some particular line of cases, both clinically and pathologically. The work will be supplemented with conferences and demonstrations in the Warren Museum. Each student will be expected to supply himself with a microscope.

ORTHOPEDIC SURGERY.

Orthopedic Surgery 1. Half-courses, afternoons, throughout the year.

The fourth-year elective course is planned to continue the third-year required course, and is suited to those who have had some acquaintance with orthopedic surgery. The exercises are clinical, combined with practical work in the out-patient orthopedic clinics and in the in-service of the Children's Hospital and in the in-service of the Massachusetts General Hospital. The instruction is given daily each afternoon in the week, and is so arranged that opportunities are given for the examination of cases, with systematic note taking, followed by instruction successively in symptoms, diagnosis, the principles and details of treatment, including instruction in the common operations of orthopedic surgery.

Each course limited to five men.

Orthopedic Surgery 2. Quarter-course, afternoons, October, December, February, and April.

Full courses are offered for those who desire and are qualified for more complete instruction. The large amount of clinical material

under the direction of the department gives ample opportunity for study and investigation.

Each course limited to four men.

OBSTETRICS AND GYNAECOLOGY.

Obstetrics and Gynaecology 1. Obstetrics. Half-courses, all day, throughout the year.

The course will be given at the Boston Lying-in Hospital and at the Medical School. During the first half of the course the student will lodge at the Hospital, and devote his time chiefly to attendance on cases in the out-patient clinic; he will also be called upon to assist at operations, and, when his other duties permit, to make ward visits with the physician on duty. In the second half of the course he will conduct the convalescence of the cases delivered by him during his resident service, write full reports of his cases, and make daily ward visits, receiving clinical instruction on house patients, and witnessing operations. In his clinical work he will have the supervision and instruction of the Department and of the Hospital Staff on duty. He will also be given, at the Medical School, a course of demonstrations in operative obstetrics, and each student will practise the various operations on the manikin.

Obstetrics and Gynaecology 2. Gynaecology. Half-courses, forenoons, throughout the year.

The courses will be given by Professor GREEN (Oct. to Jan.) and Assistant Professor NEWELL (Feb. to May), assisted by Drs. YOUNG, MASON, and R. M. GREEN, in the wards and out-patient department of the Gynaecological Service at the Boston City Hospital, and by Professor GRAVES, assisted by Dr. HUTCHINS, at the Free Hospital for Women, Brookline. These clinics afford ample material for a comprehensive study of gynaecology, from the simpler lesions requiring only minor local treatment or the various plastic operations, to the major cases treated by capital operation. Students will be given opportunity to educate the touch, and will be instructed in diagnosis and in the methods of minor treatment. The various operations, major and minor, will be demonstrated, and opportunity given to study convalescence and post-operative treatment. Students will also be required to study, and report on, pathological specimens removed by operation, under the supervision of Professor MALLORY or Professor GRAVES.

Cases will be assigned for history-taking, examination, diagnosis, with notes on operation and subsequent treatment. As far as possible students will be expected to assist in clinical work.

DERMATOLOGY AND SYPHILIS.

Dermatology and Syphilis 1. Half-courses, forenoons, October, November, December, and January.

Instruction in clinical dermatology will be given at the Massachusetts General Hospital, both in the out-patient department and in the ward for skin diseases. Instruction will also be given in the histology and pathology of the skin, with training in the preparation of microscopical preparations and in histological technique. Students electing Course 1 or 2 are strongly recommended to elect Course 3.

Dermatology and Syphilis 2. Quarter-courses, forenoons, October, November, December, and January.

The work in this course will be the same as in Course 1, with the exception that it extends over one month instead of two.

Dermatology and Syphilis 3. Quarter-courses, afternoons, in January or in February, but not in both months.

This course consists of microscopical work and is given on five afternoons at the Harvard Medical School. Students electing this course will be trained in microscopical technique and in the histological study of the commoner diseases of the skin.

Dermatology and Syphilis 4. Quarter-courses, forenoons, October and November.

Instruction in clinical syphilis will be given daily at the Boston Dispensary.

NEUROLOGY AND PSYCHIATRY.

Neurology and Psychiatry 1. Half-courses, forenoons, throughout the year.

The design of these courses is to continue the work of the third year in its practical relations. The aim will be to give the student an opportunity for the independent study of cases. To this end the following methods of instruction in general will be adopted:—

The instruction in neurology will be as follows:—

- (1) Daily systematic conferences on neurological topics.
- (2) History-taking, and personal examinations of patients at the out-patient department of the Massachusetts General Hospital.
- (3) Assistance in the clinic, both in the general examination of patients and in treatment, especially by means of electricity.
- (4) The detailed preparation of reports bearing on the subjects studied, and such original investigation as the time permits. A study of the literature bearing on special topics apart from text-books is urgently advised.

(5) Visits will also be made to institutions in the neighborhood of Boston as opportunity offers, *e. g.*, Massachusetts School for Feeble-Minded, Long Island Hospital, Boston Harbor.

In the final marking much account will be taken of the daily practical work of the student.

The instruction in psychiatry will be as follows, subject to modifications:—

(1) A conference, one evening each week, for the review and further study of the cases seen at the clinics and of other cases, and for the discussion of special subjects.

(2) Clinical instruction at the McLean Hospital one forenoon in each week. This will include attendance at the regular conferences of the Medical Staff, at which there is a careful discussion of every case on its admission to the Hospital, with the study of its history, diagnosis, prognosis, and treatment. This exercise will be followed by a visit to the wards and the examination, as far as practicable, of the cases discussed at the conferences and of other selected cases.

(3) Clinical instruction and demonstrations at the Psychopathic Department, Boston State Hospital, one forenoon in each week during October and November, for all electing this course. Also an individual case will be assigned to be reported and discussed at the regular evening conference during the year.

In this course, should the student desire, he may give his entire time to neurology.

Neurology and Psychiatry 2. Quarter-courses, forenoons throughout the year.

Instruction in these courses will be similar to that of *Neurology and Psychiatry 1*, except that it will continue for one month instead of two, and will not include psychiatry except as cases of mental disease are incidentally met with at the neurological clinic. The instruction will be given at the Massachusetts General Hospital.

Neurology and Psychiatry 3. Half-courses, forenoons or all day throughout the year.

A clinical course in which, by permission of the authorities, the wards and laboratories of the Psychopathic Hospital may be used and the daily staff-conferences attended. In addition to a complete representation of mental diseases, there is much material of a neurological and general medical interest, so that students are advised to take the work later rather than earlier in the year. Under certain circumstances students taking the course for several months may be appointed to internships by the hospital authorities.

Neurology and Psychiatry 4. Half-courses, all day throughout the year.

Special research work under conditions to be arranged in advance.

SEMINARY IN DISEASES OF THE NERVOUS SYSTEM

A voluntary weekly conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry, and for graduate students taking allied courses has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by students.

OPHTHALMOLOGY.

Ophthalmology 1. Half-courses, forenoons, second half-year.

The work will consist of personal instruction in the use of the ophthalmoscope and other instruments of precision. An opportunity will be given to work in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary and to observe and study cases in the wards. In addition there will be instruction in ophthalmic operations, with opportunity to witness their exemplification in the operative work of the hospital.

Ophthalmology 2. Quarter-course, forenoons, in February.

This course will be devoted to instruction in the use of the ophthalmoscope.

OTOLOGY.

Otology 1. Half-courses, forenoons, throughout the year.

For men who elect but one half-course, the work will consist chiefly of clinical training and instruction, hearing tests, and objective examinations and manipulations in the out-patient, house, and operating services of the Massachusetts Charitable Eye and Ear Infirmary.

For men especially interested in Otology, who wish to devote all their time to the subject, a thorough course of instruction has been planned embracing the anatomy, physiology, and pathology of the ear, in addition to clinical instruction. Each course limited to three men.

Otology 2. Otoscopy and Diagnosis. Dr. D. H. WALKER and assistant.

Quarter-course, forenoons, October, November, December, and January.

This course will be given at the Massachusetts Charitable Eye and Ear Infirmary. The student will be instructed in the objective examination of the ear, in making hearing tests and in the determination of disturbances of equilibration. He will be given an opportunity to make diagnoses in a great variety of cases. Each course limited to three men.

Otology 3. Histology and Pathology of the Ear. Dr. A. M. AMADON. Quarter-course, mornings in January, for students who have taken either Course 1 or 2.

This course will be given at the Medical School. Instruction will consist of directed reading, illustrated by specimens, and in laboratory work under the personal supervision of the instructor. Ability to read German is necessary. Each course limited to three men.

LARYNGOLOGY.

Laryngology 1. Quarter-courses, forenoons, throughout the year, except March. Massachusetts General Hospital.

These courses are chiefly clinical in character; but in addition to the routine work of the clinic, instruction will be given in diagnosis, treatment, and applied anatomy and pathology, as well as an opportunity to assist at operations. Each student is required to follow and report on some special selected subject.

Each course limited to four and preference will be given to men taking the course for two months.

Laryngology 2. Drs. R. A. COFFIN and J. H. BLODGETT. Quarter-courses, forenoons, February, March, and April. Boston City Hospital.

These courses are clinical and include both ward and out-patient service in the Department for Diseases of the Nose, Throat, and Ear.

Each course limited to two and preference will be given to men taking the course for two months.

EXAMINATIONS

There will be two kinds of examinations, general and practical. Two general examinations, each both oral and written, will be required of the candidate for the M.D. degree, the first after the completion of the second year, and the second after the completion of the fourth year of medical study. Practical examinations will be held in the various subjects of the curriculum.

For the first general examination the student may choose either June or September, but no student will be admitted to this examination until he has completed the courses included in the examination, and has passed practical examinations in these various courses. The subjects comprised in the first general examination will be Anatomy, Histology and Embryology, Physiology, Biological Chemistry, Pathology and Bacteriology. This examination further shall assume and require an elementary knowledge of Physics, Inorganic and Organic Chemistry, and Biology.

For the second general examination the student may choose either June or January, but no student will be admitted to this examination until he has passed satisfactorily the first general examination, has completed four years of medical study in four different calendar years, including at least one year of resident study at the Harvard Medical School, has completed the courses included in this examination, and has passed practical examinations in these courses. The subjects comprised in the second general examination will be Preventive Medicine and Hygiene, Pharmacology, Medicine, Surgery, Pediatrics, Obstetrics, Gynaecology, Dermatology, Syphilis, Neurology, Psychiatry, Ophthalmology, Otology and Laryngology.

No student who has failed to pass a general examination will be permitted to repeat the examination within the calendar year in which he failed. Any student who fails three times in a general examination will be debarred from further attempts.

The practical examinations will be conducted by the several Departments, and the student may choose whether he will take the practical examinations at the end of each course, or near the time of the opening of the following academic year.

In addition to the above examinations every student is required:—

To dissect the three parts of the body to the satisfaction of the demonstrator;

To receive practical instruction in anaesthesia;

To present a certificate that he has satisfactorily served as a surgical dresser in the surgical out-patient department of the Massachusetts General Hospital or Boston City Hospital for at least one month after taking the course in surgical technique in the second half of the second year;

To take charge of and report on six cases in Obstetrics, under supervision and instruction;

To furnish satisfactory evidence of having engaged in the practical exercises in Theory and Practice.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty.

Every student having entered the Medical School previous to 1912-13, after two failures to pass in any subject, must give notice twenty-four hours in advance at the Dean's Office of his intention to take each subsequent examination in that subject and pay a charge of three dollars. This will not apply to students entering in 1912-13 or thereafter.

DEGREES

DEGREE OF DOCTOR OF MEDICINE

Every candidate for the degree of DOCTOR OF MEDICINE at this University must be at least twenty-one years of age, and of good moral character. He must fulfil all the requirements for admission to this Medical School; must give evidence of having studied in a recognized Medical School at least four full years, of which one year must be spent at this School; must pass all the required examinations, and fulfil satisfactorily the special requirements enumerated above.

The degree of Doctor of Medicine will be given to those candidates who fulfil the above requirements. The degree of Doctor of Medicine *cum laude* will be given to candidates who have obtained an average of eighty per cent, or over, in all the required examinations.

Candidates for the degree must make application for it in writing, on blanks furnished at the Dean's office, on or before *May 1* of the year in which they propose to graduate.

DEGREE OF DOCTOR OF PUBLIC HEALTH

The degree of Doctor of Public Health is open to holders of the degree of Doctor of Medicine from the Harvard Medical School or other recognized Medical Schools, and to other properly qualified persons. Candidates for the degree of Doctor of Public Health must spend not less than one year in work upon a special subject, approved by the Committee on the Degree of Doctor of Public Health, and present a thesis containing some original research acceptable to the Faculty of Medicine. Candidates for this degree may be given credit for any course offered in any department of the University, provided it has the approval of the Faculty of Medicine, and candidates from other institutions may be admitted to advanced standing. A minimum of one year in residence shall be required of all candidates for the degree of Doctor of Public Health. Information in regard to this degree may be had from Professor M. J. ROSENAU, Chairman of the Committee on the Degree of Doctor of Public Health.

DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

There has been established within the Faculty of Arts and Sciences a Division of Medical Sciences consisting of members of the Faculties of Medicine and of Arts and Sciences, who are to recommend candidates for the degrees of A.M. and Ph.D. to the Faculty of Arts and Sciences. Work in Medical Sciences leading to these degrees may be carried on in several of the laboratories of the Medical School by properly qualified students.

Candidates for the degree of Master of Arts must be Bachelors of Arts of Harvard College, or Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Arts and Sciences. Candidates must pursue an approved course of study in medical science for at least one year.

Candidates for the degree of Doctor of Philosophy must fulfil certain preliminary requirements, must devote to approved advanced studies not less than two years, — at least one of which must be spent in residence at this University, and must pass general examinations and present an account of original work in an accepted thesis, before being granted the degree.

Further information concerning these degrees may be obtained from Professor WALTER B. CANNON, Chairman of the Division of Medical Sciences, Harvard Medical School.

FEES AND EXPENSES

DEGREE OF DOCTOR OF MEDICINE

The fees are :—For matriculation, five dollars; for instruction (including laboratory charges except breakage, damage and loss of apparatus) two hundred and twenty-five dollars for each year (if in two payments, at the first, one hundred and thirty-five dollars; at the second, ninety dollars); for a half-year alone, one hundred and thirty-five dollars.* The matriculation fee and the instruction fee (if in two payments, the first instalment thereof) are to be paid to the Bursar punctually at the beginning of the academic year, without the presentation of a bill; and the second instalment is to be paid on or before January 31. All charges for breakage, damage and loss of apparatus are payable to the School in accordance with the requirements established by the several departments in which they occur. A student may rent a microscope from the School upon application to the Committee on Microscopes. A deposit of one dollar with the Dean will entitle the student to the use of a locker in the School buildings.

No degree can be conferred until all dues to the University have been discharged. Each student whose dues remain unpaid on the day fixed for their payment is required at once to cease attending lectures and using laboratories or making use of any other privileges as a student until his financial relations with the University have been arranged satisfactorily to the Bursar. Failure to comply with this rule is deemed cause for final separation from the University.

* Students who were members of the School in 1912-13 or earlier will be allowed to complete the course for the fees prescribed in the Catalogue of 1912-13.

DEGREE OF DOCTOR OF PUBLIC HEALTH

A fee of \$150 is charged for tuition, and \$5 for matriculation. Of this amount, \$95 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31. No degree can be conferred until all dues to the University have been discharged.

DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

For these degrees, a fee of \$150 is charged for tuition, and a graduation fee of \$20. Of this amount, \$90 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31st. The graduation fee of \$20 must be paid before Commencement. No degree can be conferred until all dues to the University have been discharged.

STILLMAN INFIRMARY FEE

Not later than October 5 in each academic year, any student may pay to the Bursar the sum of four dollars for the maintenance of the Stillman Infirmary; and, on the order of a physician, every student who has taken advantage of this opportunity will be given, in case of sickness, in return for the fee, a bed in a ward, board, and ordinary nursing for a period not exceeding two weeks in any one academic year.

BOND REQUIRED OF STUDENTS

Every student is required to file with the Bursar on his entrance to the School a bond of *fifty dollars*, executed by two sufficient bondsmen (one of whom must be a citizen of the United States), or to deposit fifty dollars in money, to cover the loss or injury of any property belonging to the University, or for which it is responsible. Blank forms of bonds may be obtained from the Secretary of the Faculty or from the Bursar. No officer or student of the University is accepted as a bondsman. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School and have subsequently received their bond from the Bursar.

WITHDRAWAL FROM THE SCHOOL

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Administrative Board, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction. This remission will date from the reception by the Dean of a

written notice of the student's withdrawal from the School. *No degree can be granted until the student has paid the full tuition fee for each year (first, second, third, fourth) in which he has been registered as a member of the School.*

If a student withdraws from the School for part of a year for good and sufficient reason as determined by the Faculty, he may leave his fees deposited with the Bursar to be used at some later date for instruction equivalent to that which he missed by his withdrawal. If a student shortens his four years' work by working in the Summer School of Medicine, he must still pay a full tuition fee for each year he is registered as a member of the School.

CLINICAL ADVANTAGES

The Medical Department of the University is established in Boston, in order to secure for Anatomy, Pathology, and the various clinical subjects, those advantages which are found only in large cities. The following clinics and hospitals of Boston are utilized extensively for clinical exercises for medical students, who are admitted freely to the Out-Patient departments, wards and operating rooms of these hospitals : —

The Peter Bent Brigham Hospital. — The construction of this general hospital has practically been completed, and patients have already been admitted since February, 1913. The hospital is for general medical and surgical cases, and is situated on ground adjacent to the Medical School buildings. There are in all about 250 beds, and there is a medical and surgical out-patient department which is open for patients throughout the twenty-four hours. Dr. HENRY A. CHRISTIAN, Hersey Professor of the Theory and Practice of Physic, and Dr. HARVEY CUSHING, Moseley Professor of Surgery, in the Harvard Medical School, have been appointed by the trustees of the Hospital Physician-in-chief and Surgeon-in-chief respectively.

The Collis P. Huntington Memorial Hospital. — This Hospital, which has been erected by the Cancer Commission of Harvard University on the Medical School grounds, affords opportunity for the study of human tumor cases, with the advantage of a close approximation of clinical and laboratory facilities. The aim of the hospital is the study of special problems with the view of adding to the knowledge of the natural history and the rational treatment of tumors, and also to be of public service in affording means for early diagnosis and in carrying out treatment or giving advice regarding therapeutic measures. Accommodations are provided for twenty-four in-patients ; out-patients are also received at stated hours.

The Massachusetts General Hospital. — During the past year, six thousand eight hundred and ninety-six patients were treated in the wards, five

thousand five hundred and one patients were treated in the accident ward, and there were one hundred thirty-six thousand and ninety-five visits to the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, or demonstrated in the amphitheatres. Operations are numerous, and are performed in the surgical building. Last year there were four thousand and sixty-three operations in the house and three thousand and sixty-five in the Out-Patient Department and Accident Ward. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, Children's Diseases, Orthopedics, and Diseases of the Genito-Urinary System. Two Dalton scholarships, of \$500 each, are open annually to the house pupils.

The Boston City Hospital.—During the past year, seventeen thousand and four cases were treated in its wards, and there were over one hundred and ninety-nine thousand visits in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, six thousand street accidents are treated yearly. Surgical operations are performed in the amphitheatre. There are special services for diseases of women, of the eye, the ear, the skin, and the nose and throat. Diseases of women and of the nervous system are also largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons two or more times a week.

In this hospital, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching over four thousand seven hundred a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital.—More than eight hundred patients were delivered during the last year in the Hospital. In the out-patient department, nearly two thousand cases were attended by the hospital Externes, who are appointed from the third and fourth-year students. Clinical instruction is given in these cases by the physicians to out-patients and by the house physicians.

The Boston Dispensary.—About one hundred and ten thousand visits were made by patients at this public charity during the past year. Students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of

Medicine and Surgery. A well-equipped Hospital for Children, with a capacity of thirty beds (chiefly for medical cases), is attached to the Dispensary.

Infants' Hospital (Roth Memorial Building). — The wards of the Hospital are devoted entirely to children under two years of age. During the past year about two hundred and ninety-five cases were treated in the wards and twelve thousand six hundred and seventy-three visits were made by children of all ages to the out-patient department. The material of the Hospital is used throughout the year for teaching both students and graduates.

Children's Hospital. — During the past year more than seventeen hundred cases were treated in the wards and about thirty thousand visits were made to the out-patient departments. Instruction in pediatrics, surgery, and orthopedic surgery are given by members of the hospital staff.

The McLean Hospital. — During the past year a daily average number of two hundred and twenty patients, received from all parts of the country, were under treatment. Advanced methods of treatment are employed, including physical exercise, occupation, massage, hydrotherapy, etc., applied by persons expert in these methods. In the laboratories, pathological, chemical, and psychological work is carried on in immediate connection with the clinical studies and treatment of cases. There is a good special library of works in psychiatry and neurology, and a large list of American and foreign journals available for study. Clinical conferences are regularly held by the Medical Staff for the discussion of all cases admitted, including a study of the history, diagnosis, prognosis, and treatment of each case. These exercises and clinical demonstrations in the wards are available for a limited number of students.

The Boston State Hospital. — During the past year sixteen hundred and twenty-three patients were under treatment. Clinical instruction is given here in general clinics to medical students, and there are in addition facilities for the special study of cases by students taking elective courses. Besides regular commitments, emergency, voluntary and temporary care cases are received; the whole number of patients admitted last year was seven hundred and sixty-two, including many instructive examples of the various forms of mental disease.

The Psychopathic Hospital. — This is the receiving hospital of the Boston State Hospital, situated on Fenwood Road, one block removed from the Medical School grounds. The hospital was opened to patients in June, 1912. It has one hundred beds and receives patients at the rate of over one thousand five hundred a year. The Out-Patient Department receives patients at the rate of about one thousand a year. This large

admission rate insures the presence at all times in the hospital wards of a varied clinical and pathological material.

The Massachusetts Charitable Eye and Ear Infirmary. — Over sixty-one thousand visits were made by patients at this institution during the past year. These cases present every variety of disease of the ear and eye, and supply a large number of operations. A new and enlarged hospital, considered to be one of the best of its kind in the world, has been erected on land adjoining the Massachusetts General Hospital. It is believed that this building will provide adequately for the proper treatment of the constantly increasing number of patients.

Long Island Hospital, Boston Harbor. — This Hospital is designed particularly for the treatment of chronic diseases. It has three hundred and twenty-five beds, with an average daily number of patients of about three hundred. In connection with it is a maternity department with an average of twenty-seven children and twenty-nine births. It has marked advantages for the study of syphilis, tuberculosis, diseases of the nervous system, and chronic diseases of the heart and of the kidneys. The number of autopsies is annually about 75 per cent of the deaths, a fact which affords an unusual opportunity for the study of pathological anatomy. The material in the Hospital is used for clinical instruction by the members of the Visiting Staff.

The Free Hospital for Women. — This hospital is devoted exclusively to the surgical treatment of the diseases peculiar to women. The hospital has a capacity of sixty-seven beds. Operations are performed on Tuesdays, Wednesdays, and Thursdays throughout the morning. Physicians and medical students are invited to attend the operations and the medical ward visits with the Visiting Surgeon. Out-patient clinics are held every day in the week beginning at nine o'clock in the morning and at three o'clock in the afternoon excepting Saturday afternoon. The clinics average from fifteen to thirty in attendance. Post-graduate courses in gynaecological examinations are given in these clinics. A well equipped laboratory is connected with the institution, where instruction in gynaecological pathology is given. A library containing the principal works on gynaecology is available for the use of students and visiting physicians.

HOSPITAL APPOINTMENTS

About eighty appointments as Internes and Assistants are made annually to hospitals in and about Boston for terms of service varying from six months to two years. These appointments are made after a competitive examination. In recent years almost every graduate of the Harvard Medical School desirous of hospital experience has obtained an appointment in some one of these hospitals.

THE CANCER COMMISSION OF HARVARD UNIVERSITY

The Cancer Commission of Harvard University was founded in 1899, by the late Mrs. Caroline Brewer Croft, who left in her will a sum of money for the investigation of the cause and treatment of cancer. Dr. J. Collins Warren and Dr. Henry K. Oliver were the Trustees of this fund. Since that time other sums have been contributed for cancer research and the Cancer Commission of Harvard University was organized in 1909, consisting of the following members: J. Collins Warren, M.D., Chairman; Henry K. Oliver, M.D., and J. Collins Warren, M.D., for the Caroline Brewer Croft Fund; Henry P. Walcott, M.D., and Arthur T. Cabot, M.D., for the Corporation of Harvard College; William T. Councilman, M.D., and Theobald Smith, M.D., for the Harvard Medical School. To fill the vacancy caused by the death of Dr. Arthur T. Cabot, Dr. Edward H. Bradford was appointed by the Corporation in 1912; Mr. Arthur Adams was also appointed Treasurer, and Dr. Robert B. Greenough, Secretary.

Under this Commission research on cancer problems has been carried on, and five reports of research work have been published. Investigations were carried on in the laboratories of the Harvard Medical School, and at the Massachusetts General Hospital until April, 1912, when the Collis P. Huntington Memorial Hospital (page 70) was completed. The work of the Cancer Commission is at present carried on in the laboratories of the Harvard Medical School and in the Huntington Hospital. E. E. Tyzzer, M.D., Assistant Professor of Pathology, is Director; Thomas Ordway, M.D., Instructor in Medicine, is Physician in charge of the Hospital, and Ellis Kellert, M.D., is Assistant Physician; Henry A. Christian, M.D., Consulting Physician; Robert B. Greenough, M.D., Consulting Surgeon. Miss I. W. Mason is Matron and Superintendent of the Hospital.

In April, 1912, subscriptions were obtained for the establishment of a physical laboratory in connection with the work of the Commission, and William Duane, Ph.D., was appointed a Fellow of the Commission, to carry on research work in Radio-active substances, and their preparation for therapeutic use in the treatment of tumors.

During the past year, 1912-13, fifty-eight new patients were cared for in the wards of the hospital, and seventy-nine patients were seen as out-patients. The wards, operating-rooms and laboratories of this hospital are open to the students of the Harvard Medical School for undergraduate instruction and for work on special problems, both of a clinical and laboratory character. Abundant autopsy material is available for pathological demonstrations, as well as a very valuable amount of clinical material for diagnosis.

WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by JOHN COLLINS WARREN, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor *Emeritus* from 1847 to his death in 1856, son to JOHN WARREN, the first Hersey Professor of Anatomy and Surgery. This important Museum is open to students in the School, and its collections are used in demonstration of the lectures. It occupies the upper three floors of the Administration Building. Its Curator is Dr. WILLIAM FISKE WHITNEY.

The collection has about ten thousand specimens, illustrating both normal and pathological anatomy. Students may have access to these specimens at any time upon application to the Curator.

Besides dissections and serial sections of many bones, the anatomical collection includes many corrosion preparations, plaster and papier maché models of bones, organs, and various parts of the body, and frozen sections.

The pathological collection is being constantly enlarged by the addition of numerous specimens, many of them preserved in their natural colors by Kaiserling's method.

LIBRARIES

Libraries in each of the four laboratory buildings contain the literature of the subjects taught in the building. These libraries are open to students daily and contain about 23,000 volumes, 30,000 pamphlets, and receive 258 different current periodicals. The students have a small general medical library of over 400 volumes and about 20 current periodicals for their own use in their reading room in the Administration Building.

The College Library at Cambridge is open to the students of this School.

The Boston Public Library is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Bursar's office, or deposited with the Bursar the sum of fifty dollars, may also use this library. The Bursar will furnish on application the necessary certificate of bond or deposit.

The Boston Medical Library, No. 8 The Fenway, contains about 177,000 bound volumes and 56,000 pamphlets, and nearly 650 current periodicals are on file. This very valuable Library is open to those who desire to consult medical literature, on week days from 9.30 A.M. to 10 P.M., on Saturdays till 6 P.M.

FELLOWSHIPS AND SCHOLARSHIPS

FELLOWSHIPS

BULLARD FELLOWSHIPS. In 1891, WILLIAM STORY BULLARD, of Boston, gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three physicians who were distinguished for their honorable personal character and for their professional services in this community." Accordingly the three following fellowships were established:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income of the first two is two hundred and fifty dollars each, and of the last, two hundred and seventy-five dollars.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by the Administrative Board of the Medical School to make such original investigations in Medical Science as in their opinion will be most useful to the profession and to the community. The results of such investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee. If published with the approval of the Committee, mention shall be made of the fact that the work was done under a Bullard Fellowship.

Holders of Bullard Fellowships are required to do an amount of work equivalent to not less than ten hours a week throughout the academic year and to present to the Committee at the end of the academic year a report on the amount and result of the work performed.

Applications for the Bullard Fellowships must be handed to the Dean on or before May 1.

THE JAMES JACKSON CABOT FELLOWSHIP; with an income of three hundred and fifty dollars. In 1906, Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot gave six thousand dollars to establish the James Jackson Cabot Fund in the Medical School. The income remaining after adding a certain percentage to the principal each year is preferably, but not necessarily, to be used for a fellowship "to aid and encourage practical work in scientific medicine."

CHARLES FOLLEN FOLSOM TEACHING FELLOWSHIP. In 1908 eleven thousand eight hundred and forty-three dollars and sixty-four cents was given by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870, Lecturer on Hygiene, 1877-79, on Hygiene and Mental Diseases, 1879-80, on Mental Diseases, 1880-82; Assistant Pro-

fessor of Mental Diseases, 1882-85, and Overseer, 1891-1903. It was the desire of the givers that there be established in the Medical School a Charles Follen Folsom Teaching Fellowship in Hygiene or in Mental and Nervous Diseases, and that the incumbent receive the annual income of the fund, or such part of it as may be consistent with the standing rules of the Corporation in such cases. This fellowship, with an income of five hundred and seventy-five dollars, has been assigned to the Department of Hygiene until the further order of the President and Fellows.

HENRY P. WALCOTT FELLOWSHIP IN CLINICAL MEDICINE; with a stipend of one thousand dollars. Founded in 1910 by FREDERICK CHEEVER SHATTUCK, A.M., M.D., LL.D. "The income to provide for the support of a Fellow in Clinical Medicine, who shall receive his appointment from the Corporation on nomination by the Jackson Professor of Clinical Medicine, who, while the holder of the Fellowship, shall not engage in private practice but devote his time to teaching and clinical research work."

WILLIAM O. MOSELEY, JR., TRAVELLING FELLOWSHIPS; two, with a stipend of one hundred and seventy-five dollars each, for the purpose of studying medicine in Europe. In January, 1912, Mrs. William O. Moseley left a bequest of seventy-four thousand dollars to establish two travelling Fellowships, to be granted annually to two men who have attended the Harvard Medical School for three or four years, and who have given evidence of their diligence and ability, the election of such men to be made by the President and proper officers connected with the Medical School.

ARTHUR TRACY CABOT FELLOWSHIP. In 1913, Dr. and Mrs. Frederick C. Shattuck gave twenty-five thousand dollars for the establishment of a Fellowship in Surgery in memory of Arthur Tracy Cabot, M.D., of the Class of 1872, Fellow of the Corporation. The holder of the Fellowship is not ordinarily to engage in active private practice while holding it but to devote himself to the advancement of Surgery whether in the United States or elsewhere. The nomination to this Fellowship is by preference to be in the hands of the Moseley Professor of Surgery.

AUSTIN FELLOWSHIPS. Six teaching fellowships, of five hundred dollars each, have been established from the income of the Austin Fund and assigned to the Medical School.

PROCTOR FUND. A bequest of fifty thousand dollars by Ellen Osborne Proctor for the purpose of promoting the study of chronic diseases. The income of this fund is to be devoted to the care in hospital of persons afflicted with chronic disease, and to investigations into the nature and treatment of the same. The special disposition of the income of this fund is under the control of the heads of the departments of Theory and Practice of Physic, Clinical Medicine, and Pathology.

SCHOLARSHIPS

The Cheever Scholarship is awarded to a student of the first-year class. The Hayden Scholarship may be so awarded. All the other Scholarships are awarded to members of the three upper classes.

EDWARD M. BARRINGER SCHOLARSHIPS. From the estate of Edward M. Barringer, of Schenectady, N. Y., thirty thousand two hundred and thirteen dollars and forty-nine cents has been received as his residuary bequest establishing the "Edward M. Barringer fund." "And I direct that the said 'President and Fellows' forever maintain from the income of said rest and residue (if the same shall be sufficient) two scholarships for students in said Medical School, the annual amount or value of such scholarships to be fixed from time to time by the said President and Fellows in their best discretion but at not less than \$300 and \$200 respectively; and with such conditions as to them shall seem best, to be called respectively 'Edward M. Barringer Scholarship No. 1,' and 'Edward M. Barringer Scholarship No. 2.'" These scholarships, with the incomes named above, are awarded to deserving students, preferably those of the fourth class.

LUCIUS F. BILLINGS SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1900 from a bequest under the will of Lucius F. Billings. The income may be divided between two or more students.

DAVID WILLIAMS CHEEVER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1889 by David Williams Cheever, M.D., LL.D., of Boston, of the Class of 1852. It is to be awarded to a poor and meritorious student of the first year, after three months' probation in the Medical School.

ORLANDO W. DOE SCHOLARSHIP. The bequest of ORLANDO WITHERSPOON DOE (A.B. 1865, M.D. 1869) was five thousand dollars. One-half of the income derived therefrom, amounting to one hundred and twenty-five dollars, "is to be given annually as a scholarship to a deserving student in the Medical department."

JOSEPH EVELETH SCHOLARSHIPS. Three Scholarships with an annual income of two hundred dollars each. Founded from the residuary bequest of thirty-seven thousand eight hundred and ninety-seven dollars and fourteen cents, made by Joseph Eveleth, of Boston, "for aiding deserving and indigent young men in obtaining an education in said College or any of the schools connected therewith." Three Scholarships on this foundation have been assigned to the Harvard Medical School.

GEORGE HAVEN SCHOLARSHIPS, with an income of eleven hundred dollars, was founded in 1913 from a bequest under the will of George Haven, the income to be used annually for scholarships to deserving students of the first year in the Medical School, the amount of such scholarships to be at the discretion of the Scholarship Committee.

THE LEWIS AND HARRIET HAYDEN SCHOLARSHIP for colored students was founded in 1894 from a bequest of Mrs. Harriet Hayden. The income, two hundred and fifty dollars, may be divided between two or more students.

HILTON SCHOLARSHIPS. Two Scholarships, with an income of two hundred and twenty-five dollars each, were founded in 1897 from a bequest of William Hilton.

WILLIAM OTIS JOHNSON SCHOLARSHIP, with an income of one hundred and seventy-five dollars, was founded in 1912 from a bequest under the will of Mrs. William O. Johnson, in memory of her husband, William Otis Johnson, M.D., of the Class of 1845.

CLAUDIUS M. JONES SCHOLARSHIP, with an income of three hundred dollars, is from a bequest of six thousand dollars by Claudius Marcellus Jones, of the Class of 1866, M.D. 1875.

ALFRED HOSMER LINDER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1895 by Mrs. George Linder. It is to be awarded to a needy student who shall have proven himself to be of sound principles and marked ability.

THE JOSEPH PEARSON OLIVER SCHOLARSHIP, with an income of four hundred dollars, was founded in 1904 by patients of the late Joseph Pearson Oliver, M.D. 1871, to be awarded "to such needy and deserving student of the Medical School as the Administrative Board shall annually recommend."

CHARLES B. PORTER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 from a bequest of five thousand dollars by William L. Chase.

CHARLES PRATT STRONG SCHOLARSHIP, with an income of two hundred and twenty-five dollars, was founded in 1894 by friends and patients of the late Charles Pratt Strong, of the Class of 1876, M.D. 1881.

ISAAC SWEETSER SCHOLARSHIP, with an income of three hundred dollars at present, was founded in 1892 by Mrs. Anne M. Sweetser. The income is to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

THE JOHN THOMSON TAYLOR SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1899 by Mrs. Frederic D. Philips in memory of her brother, John Thomson Taylor, who died in 1889. He was a student of the Medical School from 1887 to 1889.

EDWARD WIGGLESWORTH SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 by the family of the late Edward Wigglesworth, of the Class of 1861, M.D. 1865, the yearly income of the fund to be paid to a needy and deserving student of the Medical School whom the Administrative Board shall recommend.

FRANCIS SKINNER FUND. A fund of five thousand dollars was established in 1905, the income of which shall be placed at the disposal of the Dean of the Medical School to be used by him in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses. Two hundred dollars is available annually.

This fund remained as an anonymous gift until 1908, when by vote of the President and Fellows of Harvard College it was named the Francis Skinner Fund in honor of the late Francis Skinner, Esq., the donor.

COTTING GIFT. The income of a fund received from the late Dr. Benjamin E. Cotting will be given to such medical student or students as the Administrative Board may select, having regard to the pecuniary needs, intellectual capacity, faithfulness and earnest endeavor, rather than to highest scholarship merely. The amount to be awarded annually will be one hundred and twenty-five dollars.

JOHN FOSTER FUND. The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is available in alternate years in the Law School and in the Medical School, for one or more meritorious students needing assistance. The next assignment in the Medical School will be made in 1914.

JAMES EWING MEARS SCHOLARSHIP IN MEDICINE. Dr. J. EWING MEARS has entered into an agreement with the President and Fellows whereby he has provided for the payment of \$225 a year during his lifetime for the maintenance of a scholarship in the Medical School; and the permanence of this scholarship has been secured by a bequest of \$5000. The scholarship is to be awarded to a young man whose financial resources are such that he cannot, unaided, acquire a medical education, and whose scholarship is good. This scholarship is to be held for the full course of four years in the Medical School, subject to the standing the recipient shall maintain in scholarship and to his good conduct as a student of the School.

THE LOAN FUND OF THE MEDICAL CLASS OF 1879. The Medical Class of 1879 has given the sum of \$436.79 to be used as a loan fund to aid any student or students in the Medical School in accordance with the request of the Class, or, in the absence of such request, under the direction of the Faculty of Medicine.

Fellowships and Scholarships available in other Departments of the University as well as in the Medical School

THE FREDERICK SHELDON FUND FOR TRAVELLING FELLOWSHIPS AND SCHOLARSHIPS. *The income of this Fund is available for holders of any degree from Harvard University. For further particulars, see University Catalogue for 1912-13, page 584.*

THE W. GRAHAM BOWDOIN, JR., SCHOLARSHIP; with an income of two hundred and fifty dollars, "to be awarded each year to a deserving student from the State of Maryland, who may be registered in any department of the University." For further particulars, see University Catalogue for 1912-13, page 544.

THE CHARLES ELLIOTT PERKINS SCHOLARSHIP; with an income of three hundred dollars, "to be offered each year to a graduate of an Iowa College or University, in any of the graduate or professional departments of Harvard University." The terms of gift are quoted further in the University Catalogue for 1912-13, page 556.

THE JAMES A. RUMRILL SCHOLARSHIP; with an income at present of two hundred and twenty-five dollars. This Scholarship, founded in 1909 by Mrs. JAMES A. RUMRILL, in memory of her husband, JAMES AUGUSTUS RUMRILL, of Springfield, Mass., of the Class of 1859, will be offered each year to a properly qualified graduate of a college or university in Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee or Kentucky. The terms of gift are quoted further on page 603, of the University Catalogue for 1912-13.

THE PRINCETON FELLOWSHIP; with a stipend of four hundred and fifty dollars. From a graduate of Princeton University, to be awarded to a graduate of that University studying in any department of Harvard University.

These scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of having done the best work either in this School or in a preparatory course elsewhere.

Students who have not been able to obtain scholarships often find time and opportunity to do outside work of various kinds in the city.

Information with regard to all forms of pecuniary aid may be obtained from the Director of Scholarships. The Director will aid deserving students in obtaining work. Certain loan funds not enumerated above are at his disposal. Students requiring aid should visit the Director as soon as possible to discuss with him their financial needs. The Director will also act in advisory capacity with the students in any matters not intimately associated with the curriculum.

Third-year students may apply for scholarships in January; second-year students, in February; first-year students, in March. All applications must be made before *May 1*.

Applications for the Cheever and Hayden Scholarships must be handed to the Director of Scholarships on or before *November 30*. These scholarships are open only to students who are members of the School at the time of application.

Blank forms, on which all applications for pecuniary aid must be made, may be obtained of the Director of Scholarships.

BOYLSTON MEDICAL PRIZES

These prizes, which are *open to public competition*, are offered for the best dissertation on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting held in Boston in 1913, no prize was awarded.

For 1915 there is offered a prize of three hundred dollars and the Boylston Prize Medal, for the best dissertation on the results of original research in medicine, the subject to be chosen by the writer.

Dissertations entered for this prize must be in the hands of the Secretary, H. C. ERNST, M.D., Harvard Medical School, Boston, Mass., on or before December 31, 1915.

In awarding these prizes, preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear, in place of the author's name, some sentence or device, and must be accompanied by a sealed packet, bearing the same sentence or device, and containing within the author's name and residence.

Any clew by which the authorship of a dissertation is made known to the Committee will debar such dissertation from competition.

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within *one year* after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:—

1. That the Board does not consider itself as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.
2. That, in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows of Harvard College, and consists of the following physicians: WILLIAM F. WHITNEY, M.D., *Chairman*; HAROLD C. ERNST, M.D., *Secretary*; THEOBALD SMITH, M.D., WILLIAM T. PORTER, M.D., HENRY A. CHRISTIAN, M.D., EDWARD H. NICHOLS, M.D., JOHN WARREN, M.D.

The address of the *Secretary* of the Boylston Medical Committee is HAROLD C. ERNST, M.D., Harvard Medical School, Boston, Mass.

William H. Thorndike Prize.—A prize of two hundred dollars will be given annually to the author of the best essay on some subject in any branch of Surgery.

The students of the Harvard Medical School and graduates of under five years' standing of any recognized medical school are eligible in competition for this prize.

Each essay must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same sentence or device, and containing within the author's name and residence. If the author is a graduate, it must also contain the date of his graduation in medicine and the medical school from which he was graduated. Any clew by which the authorship of an essay is made known to the judges will debar such essay from the competition.

The essays must be sent to the Dean of the Harvard Medical School, Longwood Avenue, Boston, Mass., U. S. America, on or before November 1 of each year, and the award will be made annually on December 24. If no essay is considered worthy of a prize, no award will be made.

Otological Prize.—For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, a prize of twenty-five dollars is offered, open to fourth-year students.

Other Prizes.—The Bowdoin, Dante, Sumner and Toppan Prizes, offered by the Faculty of Arts and Sciences, are open to students in all departments of the University. Full particulars in regard to these prizes may be found in the University Catalogue for 1912-13, pages 526-532 and 581-584.

SPECIAL STUDENTS

All courses, including laboratory courses, in the Harvard Medical School are open to persons not candidates for the degree of Doctor of Medicine; that is to say, to special students and to students in other Departments of the University. Hitherto such students have been registered as members of the Harvard Medical School; but, with the establishment of the Graduate School of Medicine, October 1, 1912, these special students are enrolled in the membership of that School, if they are not candidates for the degree of Doctor of Medicine. In order to be admitted to a course, the applicant must satisfy the head of the Department concerned of his fitness to pursue the work, and must be accepted as a student by the Administrative Board of the Graduate School of Medicine.

GRADUATE SCHOOL OF MEDICINE

On October 1, 1912, graduate instruction in medicine was organized as a Department of the Faculty of Medicine of Harvard University, with a separate Dean and Administrative Board.

The object is, by better organization and the development of teaching facilities, — both clinical and laboratory, — to offer graduates in medicine opportunities to continue their studies in as thorough and scientific a manner as in the Medical School proper.

Adequate opportunities for study will be offered for those graduates who wish to review past studies and for those who wish to keep abreast of recent advances in medicine. Other courses will be offered for those who are interested in special subjects, and the excellent opportunities for advanced study and for research in all departments of medical science will be made available for those who are qualified by previous training to undertake such work. Thus graduates in medicine, both of remote and of recent date, whether desiring fundamental reviews or in quest of the attainment of higher standards, are provided for. Graduates of recognized medical schools will be accepted as students.

While all courses are intended primarily for those who hold degrees from recognized medical schools, certain courses in the scientific subjects are adapted to the needs of advanced students and teachers of science. Such persons may be admitted to courses on the approval of the Administrative Board.

Undergraduate students of medicine may be admitted by vote of the Administrative Board to such courses as they are qualified to take. Special consideration for the needs of such students will be given in the plans for summer courses.

The laboratory facilities in the buildings of the Harvard Medical School and at some of the hospitals are available for graduate instruction, as are also abundant clinical opportunities of all kinds in the following institutions : —

Massachusetts General Hospital,	Children's Hospital,
Boston City Hospital,	Infants' Hospital (Rotch Memorial Building),
Peter Bent Brigham Hospital,	Massachusetts Babies' Hospital,
Carney Hospital,	McLean Hospital,
Boston Dispensary,	Boston State Hospital,
Massachusetts Eye and Ear Infirmary,	Danvers State Hospital.
Boston Lying-in Hospital,	
Free Hospital for Women,	

Clinical and laboratory instruction will be conducted in small classes so that students may receive personal attention.

The fees for separate courses vary from \$5 to \$125, according to the nature of the instruction and the duration of the course. An extra fee is required for the use of material in laboratory, dissecting, and operative courses.

Graduates seeking admission to any of the graduate courses must first register their names at the office of the Dean of the Graduate School of Medicine, where all fees are payable, and obtain a receipt to be shown at the first exercise.

For further information and full description of the courses and lectures for graduates, address the Dean of the Graduate School of Medicine, Harvard Medical School, Longwood Avenue, Boston, Mass.

TABULAR VIEW OF UNDERGRADUATE COURSES

FIRST YEAR — First Half-Year

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10			<i>October and November.</i> Anatomy. Lecture or Demonstrations. <i>December and January.</i> Histology and Embryology. Lecture.			<i>October to January.</i> Lecture.
10-1			<i>October and November.</i> Anatomy. Dissection. <i>December and January.</i> Histology and Embryology. Laboratory.			<i>October to January.</i> Examinations or Laboratory.
2-3			<i>October and November.</i> Histology and Embryology. Lecture. <i>December and January.</i> Anatomy. Lecture or Demonstrations.			
3-6			<i>October and November.</i> Histology and Embryology. Laboratory. <i>December and January.</i> Anatomy. Dissection.			

FIRST YEAR. — Second Half-Year

PHYSIOLOGY. FEBRUARY

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10			Lecture or Demonstration.			
10-1			Laboratory Experiments.			
			<i>March, April, May.</i>			
9-10			Lecture or Demonstration.			
10-12.15			Laboratory Experiments.			
12.15 -1			Thesis or Lecture or Laboratory Experiments.			
			BIOLOGICAL CHEMISTRY.			
2-3		Lecture. Daily except Saturday.				
3-5.30	Laboratory.	Laboratory and Conference.	Laboratory.			

SECOND YEAR. — First Half-Year.

	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.
9-12	Pathology. Laboratory.	1 week. Pathology. Laboratory. Daily.	2 and 3 weeks. Pathology of certain Parasitic Diseases. Laboratory. T. Smith and E. E. Tyzzer. Daily.	9-10 Monday, Wednesday, and Friday. Surgery. Clinical Lecture. Nichols. B. C. H. 9-12 Tuesday, Thursday, and Saturday. 10.30-12 Monday, Wednesday, and Friday. Pathology. Laboratory.
12-1		Pathology. Lectures. Daily.		12-1 Pathology. Lectures. Daily.
2-3	Bacteriology. Lectures. Daily except Saturday.		Neuropathology. Daily except Saturday. Lectures and Laboratory. Southard.	Surgical Pathology. Nichols. Surgery. Cushing and assistants.
3-5.30	Bacteriology. Laboratory. Daily except Saturday.			

SECOND YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10	Medicine M. G. H. Edsall	Neurology M. G. H. Taylor	Surgery B. C. H.	Dermatology M. G. H. White	Surgery M. G. H.	Medicine B. C. H. Sears
10-12	Section Work Anatomy, Medicine, Surgery See Section Schedules					
1-2	Clinical Pathology Hewes Bldg. D	Hygiene Rosenau Bldg. E	Clinical Pathology Hewes Bldg. D	Pharmacology Feb., March, April Hunt Bldg. E	Clinical Pathology Hewes Bldg. D	
2-3	Clinical Pathology Hewes Bldg. D	Hygiene Rosenau Bldg. E	Clinical Pathology Hewes Bldg. D	Pharmacology Hunt Bldg. E	Clinical Pathology Hewes Bldg. D	
3-4	Pharmacology Hunt Bldg. E	Medicine Christian Bldg. A, Room 201	Pharmacology Hunt Bldg. E	Obstetrics Green Bldg. A, Room 205	Medicine Christian Bldg. A, Room 201	
4-5	Hygiene Rosenau Bldg. E	Surgery Bldg. A Room 201	Hygiene Rosenau Bldg. E	Surgery. Bldg. A, Room 205	Pharmacology May only Hunt Bldg. E	

THIRD YEAR. — First Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-12	Section Work. See Section Schedules					
12-1 or 12.30- 1.30	Medicine P. B. B. H. Christian	Surgery M. G. H. and B. C. H.	Surgery P. B. B. H.	Medicine M. G. H., Edsall and B. C. H., Sears	Pediatrics Children's Hosp. Rotch	Syphilis <i>Sept. 23 to Nov. 19</i> B. D. Post. Neurology <i>Nov. 19 to Dec. 31</i> M. G. H. <i>Jan.</i> Psychopathic
1 or 1.30 -2.30	Luncheon Period					
2.30- 3.30	Obstetrics Green Bldg. A, Room 205	Medicine Christian Bldg. A, Room 201	Gynecology and Otolaryngology on alternate weeks Bldg. A, Room 205	Obstetrics Green Bldg. A, Room 205	Medicine Christian Bldg. A, Room 201	
3.30- 4.30	Surgery Bldg. A, Room 201	Ophthalmology and Laryngology on alternate weeks Bldg. A, Room 205	Pediatrics Bldg. A, Room 201	Surgery Bldg. A, Room 201	Medicine and Pathology Bldg. D	
4.30- 5.30					Medicine and Pathology Bldg. D	

THIRD YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-12	Section Work. See Section Schedules					
12-1 or 12.30- 1.30	Medicine P. B. B. H. Christian	Surgery M. G. H. and B. C. H.	Surgery P. B. B. H.	Medicine B. C. H., Sears and M. G. H., Edsall	Pediatrics Children's Hosp. Rotch	Neurology and Psychiatry <i>Feb., Mar., Apr., May</i> M. G. H.
1 or 1.30 to 2.30	Luncheon Period					
2.30- 3.30	Obstetrics Bldg. A, Room 205	Medicine Bldg. A, Room 205		Medicine Bldg. A, Room 201	Surgery Bldg. A, Room 205	
3.30- 4.30	Surgery Bldg. A, Room 201	Orthopedic Surgery and Syphilis alternate weeks Bldg. A, Room 205	Pediatrics Bldg. A, Room 201	Dermatology and Psychiatry alternate weeks Bldg. A, Room 201	Medicine and Pathology	
4.30- 5.30					Medicine and Pathology	

DEGREES

ON FEBRUARY 26, 1913, DEGREES WERE CONFERRED AS FOLLOWS: —

M.D.

Isaac Alcuzar, A.B. (*Univ. of Wisconsin*) 1908.
 Richard Dana Bell, A.B. 1908.
 Roger Paul Dawson, A.B. (*Holy Cross Coll.*) 1907.
 Otto Woodson Grisier, A.B. (*Indiana Univ.*) 1910.
 Sterne Morse.
 John Joseph Murphy, A.B. (*Holy Cross Coll.*) 1907.
 Ralph Leavitt Reynolds, A.B. (*Colby Coll.*) 1906.

M.D. *cum Laude*

George Edwin Eversole, A.B. 1907. Hugo Oliver Peterson.

ON COMMENCEMENT DAY, JUNE 20, 1913, DEGREES WERE CONFERRED AS FOLLOWS: —

Dr.P.H.

William Dodge Frost, S.B. (*Univ. of Minnesota*) 1893, S.M. (*ibid.*) 1894,
 PH.D. (*Univ. of Wisconsin*) 1903.
Thesis, "The Bacteriological Control of Public Milk Supplies."
 Lewis Wendell Hackett, A.B. 1905, M.D. 1912.
Thesis, "The Application of New Methods to the Study of Bacteria in
 the Air."

M.D.

William Potter Buffum, Jr., A.B. (*Brown Univ.*) 1909.
 Fergus Almy Butler, A.B. 1908.
 James Charles Carter, A.B. (*De Pauw Univ.*) 1909.
 Allan Rowe Cunningham, A.B. 1909.
 Charles Samuel Curtis, A.B. (*Clark Univ.*) 1909.
 William Francis Dolan, A.B. 1910.
 James Francis Faulkner, A.B. (*Bates Coll.*) 1908.
 John Milton Gilchrist, S.B. (*Cornell Coll.*) 1909.
 Harold Merle Goodwin, A.B. (*Bates Coll.*) 1908.
 Ralph Augustus Goodwin, A.B. (*Bates Coll.*) 1908.
 Jeremiah Augustine Greene, A.B. 1909.
 Irving William Jacobs, A.B. 1909.
 Albert David Kaiser, S.B. (*Univ. of Rochester*) 1909.
 Boyd Merrill Krout, PH.B. (*Ohio Univ.*) 1909.
 Francis Twining Krusen, A.B. (*Ursinus Coll.*) 1909.

- Thomas Eugene Lavelle, A.B. (*Georgetown Univ.*) 1909.
 Charles Owen McCormick, A.B. (*Indiana Univ.*) 1911.
 William Frank MacKnight, A.B. (*Holy Cross Coll.*) 1908.
 Edgar Matthias Medlar, S.B. (*Doane Coll.*) 1908, A.M. (*Univ. of Nebraska*) 1911.
 Edwin Alonzo Meserve.
 Charles Serpa Neves, A.B. 1911 (1910).
 Philip Hale Pierson, A.B. (*Yale Univ.*) 1908.
 Howard Edwin Ruggles, A.B. (*Leland Stanford Jr. Univ.*) 1907.
 Roger Ralph Rupp, S.B. (*Muhlenburg Coll.*) 1909.
 Abdul Malik Saad, A.B. (*Assiout Coll.*) 1908.
 Mitchell Sisson, A.B. 1910.
 Byron Polk Stookey, A.B. (*Univ. of Southern California*) 1908, A.M. (*Harvard Univ.*) 1909.
 Seth Lake Strong, A.B. (*Oberlin Coll.*) 1909.
 John Jay Terrall, S.B. (*Cornell Coll.*) 1907.
 Edward Bancroft Towne, A.B. 1906.
 Abram Lee Van Meter, A.B. (*Univ. of Kansas*) 1909.
 Charles Fletcher Warren, PH.B. (*Brown Univ.*) 1909.
 Wolfert Gerson Webber, A.B. 1909.
 John Alexander Wentworth, A.B. (*Bowdoin Coll.*) 1909.
 Alexander Hamilton Williamson, S.B. (*Univ. of California*) 1911

M.D. *cum Laude*

- George Benet.
 Francis Gilman Blake, A.B. (*Dartmouth Coll.*) 1908.
 DeWitt Scoville Clark, Jr., A.B. (*Yale Univ.*) 1909.
 Elliott Carr Cutler, A.B. 1909.
 George Parkman Denny, A.B. 1909.
 John Favill, A.B. (*Yale Univ.*) 1909.
 Francis Browne Grinnell, A.B. 1909.
 Lewis Webb Hill, A.B. 1910 (1909).
 William Gordon Lennox, A.B. (*Colorado Coll.*) 1909.
 Edward DeWitt Leonard, A.B. (*Amherst Coll.*) 1909.
 William Reid Morrison, A.B. 1910.
 Albert Abraham Shapira, S.B. 1910.
 Edward Bernard Sheehan, A.B. (*Boston Coll.*) 1909.
 Carlon TenBroeck, A.B. (*Univ. of Illinois*) 1908.
 Edward Tubbs Wentworth, A.B. 1909.
 Thomas William Wickham, A.B. (*Holy Cross Coll.*) 1909.

ADMISSION EXAMINATION

1913

CHEMISTRY

INORGANIC CHEMISTRY

1. Describe hydrochloric acid, nitric acid, carbonic acid, sodium bicarbonate, calcium chloride.
2. Describe the commercial preparation of sulphuric acid and of ammonia.
3. Explain why some acids are "strong" and others "weak."

ORGANIC CHEMISTRY

1. Give the names and formulae of three alcohols.
2. Describe the properties and reactions of "carbolic acid."
3. Write the constitutional formulae of ether, aniline, chloroform, picric acid.

EXAMINATION PAPERS

(*Annual Examinations, 1913*)

First-Year Studies

ANATOMY — Asst. Professor WARREN

1. Describe the sternum and the sterno clavicular articulation.
2. Describe the extensor muscles of the forearm and hand.
3. Describe the course and distribution of the vagus nerve.
4. Describe the liver, including its position and relations.
5. Describe the position and relations of the rectum.
6. Describe the course relations and branches of the femoral and popliteal arteries.

HISTOLOGY AND EMBRYOLOGY — Asst. Professor LEWIS

1. Section of the umbilical cord of a 17 mm. pig embryo. Make a low power outline drawing of the entire section, and label all the structures shown. From what germ layer is each of the structures derived?
2. What is the tissue? Draw carefully a few of its cells to show their cytological characteristics.
3. Draw a diagram of a complete renal tubule, and label its subdivisions. Which of these parts can be identified in the specimen, and how are they recognized?
4. What are the principal groups of nerve cells seen in the specimen? What are the chief fibre connections of each?
5. What is the organ?

PHYSIOLOGY — Professor CANNON

1. Describe the relations of neurones and the general functions of the autonomic system.
2. Describe conditions affecting the coagulation of blood, and the factors involved in the process.
3. What happens in a blood pressure record when the depressor nerve is stimulated? When the peripheral end of the cut vagus is stimulated? Explain each change.
4. Discuss the correlation of gastric and intestinal digestion through the agency of the pyloric sphincter.

5. Discuss influences, nervous and vascular, affecting the respiratory center. What functions do these influences perform in connection with respiration?

6. State conditions determining the number of corpuscles per cubic millimetre of blood, and the percentage of haemoglobin.

BIOLOGICAL CHEMISTRY — Professor FOLIN

1. Discuss the digestion absorption and oxidation of fats in the animal body.

2. Give the chief characteristics in composition and properties of milk-sugar, glucose and starch.

3. Write graphic formulas of uric acid, allantoin, oleic acid, tyrosin and phenylalanin.

4. Discuss "nitrogen equilibrium."

5. Describe the determination in urine of (a) uric acid, (b) total nitrogen, (c) phosphates.

Second-Year Studies

BACTERIOLOGY — Professor ERNST

1. What is "Neisser's" stain and what is it used for?

2. What is the importance of bacteria in the air?

3. What is meant by "carriers" of infection? Give an example.

4. Describe the bacteriological examination of material from a case of sore throat — suspected of being diphtheria.

PATHOLOGY — Professor COUNCILMAN

1. What is the difference between general death and necrosis? What are the characteristics of necrotic tissue and to what are they due?

2. Discuss haemolysis. What are the conditions which favor the formation of thrombi and how do these act.

3. What are the conditions which favor regeneration after injury? Give an example of regeneration.

4. A woman had died of a recurrent carcinoma of the breast. Describe and discuss the conditions usually found at the autopsy.

5. A child three years of age had died of diphtheria. Describe and discuss the conditions usually found in the lungs in such cases.

6. Give the most common primary localization of tuberculosis and the routes and methods by which the disease extends in the body.

EXAMINATION IN PARASITOLOGY

(Write on separate paper.)

1. Illustrate by one example the transmission of parasites through the agency of (a) contract, (b) food, (c) soil, (d) insects or other invertebrate hosts.

2. In what respects does the life cycle of the malaria parasite differ from that of the coccidium of the rabbit?

EXAMINATION IN NEUROPATHOLOGY

(Write on separate paper.)

1. Sketch the degenerations to be found in cross sections of the cervical and lumbar spinal cord in a case of crush of the thoracic region. Note the alterations of the knee jerk and of the plantar reflex likely to be entailed thereby, listing or sketching the neurones involved in these reflexes before and after the lesion.

PREVENTIVE MEDICINE AND HYGIENE — Professor ROSENAU

1. The population of Portland was 50,145 in 1900, and 58,571 in 1910. In 1912 there were 1023 deaths and 1324 births. During the same year 69 cases of typhoid fever were reported, with 18 deaths. The deaths by ages were as follows:—

Under 1	172	40 to 50	93
1 to 5	38	50 to 60	123
5 to 10	15	60 to 70	168
10 to 20	28	70 to 80	144
20 to 30	71	80 to 90	66
30 to 40	90	90 to 100	15

What was the death rate in 1912?

What was the infant mortality?

What was the typhoid death rate?

What was the mortality from typhoid fever?

2. What measure would you adopt to check an outbreak of diphtheria in an orphan asylum?

3. If you were called as a sanitary expert in the case of an epidemic of typhoid fever in a town using raw river water, what recommendations would you make to obtain immediate relief?

4. Briefly define: "Temporary carrier," "fixed virus," "Mills-Reincke phenomenon," "intermediate host," "pasteurization," "variola inoculata," "certified milk," "return cases."

Third-Year Studies

THERAPEUTICS — Professor PFAFF

1. Action and uses of mercury.
2. Action and uses of morphine.
3. Action and uses of digitalis.
4. Name the different drugs used in the treatment of tapeworms, and state how the patient should be prepared for the treatment.
5. Give the treatment for a case of chronic diarrhoea.
6. Having to treat a case of obesity, what measures would you advise to reduce body weight?
7. Treatment of acute and chronic diseases of the kidneys.
8. Write prescriptions for the following drugs, avoiding abbreviations and giving full directions to the patient:—

(a) Ergot.	(c) Mercury.	(f) Digitalis.
(b) Carbolic acid.	(d) Phenacitine.	(g) Strychnine.

THEORY AND PRACTICE OF PHYSIC — Professor CHRISTIAN

1. Describe the symptoms of chronic lead poisoning. How does a case of chronic lead poisoning differ from one of chronic arsenic poisoning?
2. Discuss lobar pneumonia from the view-point of a biological problem.
3. Describe the dietetic and therapeutic management of a case of chronic interstitial nephritis of moderate severity.
4. A palpable mass is found in the left half of the abdomen of a male patient, — discuss the possibilities as to diagnosis, describing such features as would lead you to make these various diagnoses.
5. Describe the results of hyperactivity and hypoactivity of the adrenal glands in relation to pathological conditions in man.

CLINICAL MEDICINE — Professor EDSALL

Discuss these cases in the order in which they are arranged. Assume that symptoms not mentioned are wanting, but as omissions, intentional or not, may occur, state them if essential. The intelligent discussion of the case will have more weight than a hasty and inconclusive though correct diagnosis. Write out all prescriptions in full.

CASE 1.

In December, 1912, an Italian boy of fifteen began to have severe diarrhoea with blood and pus in the stools which were passed every hour for three days. Fever 101° – 103° accompanied this diarrhoea. On the fourth day diarrhoea and fever ceased and a slight soreness in the knees and ankles was noticed. On account of this he stayed ten days in bed though free from pain or fever. After being up and about for three

weeks he began to notice dyspnoea on exertion and pallor became marked. In other respects he feels perfectly well and January 20th consults a physician on account of extreme yellow pallor. Family history, previous history, and habits good.

Physical examination shows poor nutrition and striking yellowish pallor. The pulse 120, regular. Systolic blood pressure 100. Cardiac impulse wavy and diffuse. Cardiac dulness extends one inch outside the left nipple in the fifth interspace and one-half inch beyond the right sternal margin. No thrill. At the apex a short, high-pitched systolic murmur and a low-pitched rumble at the end of diastole. Neither murmur is widely transmitted. Over the lower end of the sternum there is an early diastolic murmur. All the cardiac sounds are heard as in health. The pulse wave rises and falls very quickly. Lungs, abdomen, and extremities normal. Urine normal. No fever. Blood: red cells, 3,700,000, white cells, 15,800. Haemoglobin, 45 per cent. The stained smear shows marked achromia, moderate poikilocytosis and an excess of polynuclear leucocytes.

Diagnosis? Prognosis? Treatment?

CASE 2

Miss U., aged forty-eight, was always well until eight years ago when she fell through a trap door into the cellar below. She did not strike her head in falling and was not injured, but within a few hours developed a severe headache which lasted three months with occasional respites of a few hours at a time. From the third to the sixth month after this fall the headache came only about once a week and lasted six to twelve hours.

Six months after the fall she had "a fit" with coma, generalized clonic convulsions, and biting of the tongue. A year later she had a similar attack, and since then the convulsions have become more and more frequent, so that at present they occur about once a week. The sphincters are never relaxed during an attack.

Appetite, bowels, sleep and weight are normal, and between fits she feels well though somewhat weak. Family history and habits good. Menopause eight years ago.

Physical examination shows a systolic blood pressure of 195 mm. Hg. The cardiac outlines cannot be determined owing to extreme obesity. Auscultation reveals nothing abnormal in the heart or lungs. Abdomen and extremities normal. Head negative except for scars on the tongue. Night urine one and a half pints. Day urine one pint. Specific gravity 1010. Albumen slight trace. No casts. Blood normal.

Diagnosis? Prognosis? Treatment?

CASE 3

A florist salesman of forty-six, born in England, living in Massachusetts, gives the following history:—

F. H. Not important. His wife has had one miscarriage; two children, living and well.

P. H. Scarlet fever in childhood, typhoid at twenty-two years. Denies venereal disease. Habits moderate.

P. I. Patient was suddenly seized, while at work, with a sharp pain in left lower quadrant, speedily becoming knife-like and develop-

ing into a series of cramps.* There were frequent loose stools. The attack lasted an hour and a quarter; a slighter attack followed shortly after; the stools were watery and copious. There was no fever. The white count was low. There was some tenderness and spasm of abdomen, on the left. The case was seen by a surgeon but was not considered surgical. Under hot fomentations and one-quarter grain of morphine patient was relieved. There was no nausea or vomiting. When seen the next day the examination was as follows:—

P. E. T. 98.4 — P. 88 — R. 22 — Hb. 80 per cent — White count 12,000. Blood smear, negative. Well developed, obese. Pupils slightly irregular, left greater than right, both react to distance, slightly to light; no lead line. The lungs showed nothing important. There was slight enlargement of the heart; a distinct systolic and diastolic murmur could be heard in second right interspace; there was slight increase in the sub-sternal dullness. Blood pressure: systolic 150, diastolic 65. The abdomen was not remarkable. Rectal examination negative. Extremities negative. No oedema. Knee jerks present, equal but rather sluggish. Urine—normal in amount—normal gravity—Acid—no albumin or sugar—no urobilinogen—no bile or diacetic acid—very slight trace of acetone. Sediment showed round cells. Stool—yellow, soft, alkaline—Guaiac negative. Wassermann moderately positive on one examination, strongly positive on second. Lumbar puncture 8 c.c.—clear fluid—not under pressure; cell count 85, of small mononuclear type. X-ray of chest shows cardiac enlargement with increase of sub-sternal shadow, suggesting dilatation of the arch. During his stay in the hospital his temperature ranged from 97.4 to 98.4—pulse 60 to 80—respiration 20 to 22. The blood pressure varied from 140–160 systolic—55–65 diastolic.

Diagnosis? Prognosis? Treatment?

PEDIATRICS—Professor ROTCH

More credit will be given to an intelligent discussion of the case than to a correct diagnosis unsupported by such discussion.

1. William M. was seen when eight months old. There was one other child well, none had died, and there had been no miscarriages. There had been no tuberculosis in the family and no known exposure to tuberculosis. He was born at full term after a normal labor, was normal at birth and weighed 8 lbs. He was given a very strong modified milk at once. He gained rapidly and did well on this for a month. He then began to spit up a good deal and to have loose, undigested movements. His weight gradually went up to 12 lbs. He then began to lose and was given Mellin's Food prepared with milk. While taking this he vomited a great deal and had a severe diarrhoea. After a week he was put on modified milk. He continued to vomit and to have bad movements so that when five months old he weighed only 10 lbs. He was then put on Eskay's Food and milk, the formula figuring about 3% of fat, 5.50% of sugar, 2.25% of proteids and 2% of starch. He took five or six feedings of 6 ounces. He vomited much less and had no colic. His bowels, however, became constipated, enemata being needed constantly. The movements were, however, although hard,

well digested. The weight then went up to 12 lbs., when he was six months old and remained there afterward. He seemed well and happy but had lost a good deal of color.

Physical Examination. — He was small and thin. There was marked pallor of the skin and mucous membranes. The skin was in good condition. He was bright and happy. The anterior fontanelle was three cm. in diameter and somewhat depressed. The hair was worn off the back of the head. There were two teeth. The tongue was clean. The mouth and gums were healthy and the throat normal. There was no rosary. The heart and lungs were normal. The abdomen was much enlarged but not tense. It was everywhere tympanitic and there was no evidences of fluid. Several masses, one or two inches in length, and one inch or more in width, were felt scattered throughout the abdomen. The masses were movable and not tender. The upper border of the liver flatness was in the 5th space; the lower border was not palpable. The spleen was not palpable. The genitals were normal. The extremities showed nothing abnormal. There was no spasm or paralysis. The knee jerks were equal and normal. Kernig's sign was absent. There was very slight enlargement of the peripheral lymph nodes. The color of the urine was normal. The temperature was 99°F.

(Discuss the above case, giving the differential diagnosis, prognosis and treatment.)

2. (a) At what time should the anterior fontanelle close normally ?
(b) In what order do the temporary teeth appear normally ?
(c) At what age should an infant hold up its head ?

3. A baby, three months old, weighs eleven pounds. It is taking 8 feedings of 3 ounces of a mixture of equal parts of whole milk and barley water, containing 1.50% of starch, to which 2 rounded table-spoonfuls of milk sugar is added. The mixture is not pasteurized. It is desirable to have this food prepared at a laboratory.

Write the prescription for this food. Does it provide sufficient calories and proteids to cover the caloric and proteid needs of the baby ?

4. What factors govern the dosage of antitoxin in diphtheria and how would you tell the amount needed in a given case ?

5. State what you understand by infectious diarrhoea and give some of the causes. Give the differential diagnosis from other causes of diarrhoea and the general treatment for the infectious class.

6. State the causes which may produce convulsions in infancy.

SURGERY — Professor CUSHING

1. Describe the treatment of congenital club-foot in a child of three previously untreated.

2. Discuss the indications for the drainage of wounds: Describe the methods and the management of the same.

3. (a) A number of the tendons of the wrist have been cut and sutured: How soon should motion be begun and why ?

(b) The Tendo Achilles has been cut for club-foot: How soon should motion be begun and why?

(c) An abdominal wound has been made 6" long in the median line: How soon should the patient sit up? How soon should he be allowed to walk? How soon should he go without an abdominal support?

4. Describe the progress of a severe case of intra-abdominal hemorrhage, due to slipping of a ligature from the uterine artery, after hysterectomy. Treatment.

5. What would be your treatment of a bad felon of the thumb of three days' duration? Prognosis.

6. Symptoms and treatment of a case of acute tetanus developing five days after a blank-cartridge wound of the palm of the hand. Prognosis.

7. What is the lesion in a Pott's Fracture? What are the symptoms and treatment?

8. Etiology, symptoms, and treatment of acute gangrenous cholecystitis.

9. Symptoms, treatment, and prognosis of fracture of the base of the skull.

10. Of what fallacies should the surgeon be aware when using the X-Ray for the diagnosis of fracture cases?

CLINICAL SURGERY—Professor CUSHING

1. A man of forty-nine had typhoid when twenty; otherwise perfectly well until two years ago. He then noticed occasional discharges of mucus from rectum and some staining of nightgown in morning; discharge was glary but not bloody. He consulted a physician who told him, without examination, that he had colitis, and advised irrigations. For a time mucus diminished, but about a year ago increased and was slightly blood stained. There was no pain in rectum; no pain on defecation; stools, with the exception of a little bloody mucus, normal. He consulted another physician, who again, without examination, told him he had hemorrhoids, and advised astringent suppositories. Six months ago, noticed increasing constipation with some colicky pains, and occasional attacks of diarrhoea with blood. During last three months, lost 15 pounds in weight and feels generally tired; complains of occasional pains down back of right leg. Rectal examination reveals on right anterior wall, a cauliflower mass the size of a hen's egg, projecting far into lumen of rectum with an indurated base. A portion was removed with free bleeding and reported by a competent pathologist to be a papillary adenoma. Patient's temperature normal; pulse 72 and of good quality; hemoglobin 80 per cent.

(a) What further examinations should be made?

(b) What is the probable diagnosis?

(c) What treatment would you advise and why?

(d) What is the prognosis and course of the disease without operation?

(e) What palliative treatment would you advise if colostomy were refused?

2. Man of fifty-nine; wife and nine children well; family history negative. No illnesses except occasional attacks of rheumatism. Moderate use of tobacco; drinks sparingly; denies venereal disease. Best weight twenty years ago 175 pounds; three years ago 160 pounds. Present weight 142 pounds; had lost a good deal in past six months. For many years patient has had some trouble with stomach; heartburn; sour eructation of gas; mild distress after food, not serious and not constant. Six years ago, gnawing in epigastrium; feeling as if food pressed against diaphragm; vomited occasionally. For past six months, burning sensation; more constant and more severe; general condition running down, but has worked up to five days ago. For two weeks has vomited more frequently; often three or four times a day. Vomitus is intensely acrid, but contains no blood and no evidence of food eaten the day before. Burning pain relieved slightly by food for half an hour, then gradually returns and is worse two to three hours after meals; soda gives some relief. No jaundice; no melena. Has made no change in diet, and appetite is still good. General physical examination negative; urine normal; leucocytes 8600; hemoglobin 85 per cent. On inflation, lower border of stomach 3 cm. below umbilicus; no tumor can be felt; capacity 1800 c.c. Fasting contents: 25 c.c.; yellowish; clear with slight sediment; cells and mucus; few starch granules. Test meal: dark brownish; 50 c.c., with one third food residual; reaction acid; free HCl 0.056; total acidity 0.127; guaiac positive; two days later guaiac negative. X-rays negative; stomach outlines normal; some evidence of cecal stasis.

- (a) What is the probable diagnosis ?
 - (b) Would you advise exploratory laparotomy ?
 - (c) Describe the various lesions which may be found at operation, and what operation you would perform in consequence.
3. Under what circumstances should a partial gastrectomy be performed.

OBSTETRICS — Professor GREEN

1. What changes take place in the musculature of the uterus from the beginning of pregnancy to the termination of the puerperium ?

2. Mention the symptoms and signs which would warrant a presumptive diagnosis of pregnancy. What signs are essential to a positive diagnosis ? What variant symptoms would suggest the possibility of an ectopic pregnancy, and call for careful physical examination to confirm or disprove this suspicion ?

3. What anomalies of, or accidents to, the umbilical cord may prove a cause of dystocia or of danger to foetal life ?

4. What are the characteristics of the pelvis aequalibiter justo minor ? In the event of spontaneous delivery through a pelvis of this type, in what respects does the mechanism differ from that observed in normal pelves ?

5. What is the normal mechanism of spontaneous delivery in presentations of the frank breech ? In the event of inefficiency of the expulsive forces, what operative assistance is indicated according to the stage in the delivery at which the normal forces fail ?

6. A young primigravida under careful supervision is found to have a pelvis with these measures: intercrystal, 26 cm.; interspinous, 23 cm.; external conjugate, 17.5 cm.; inter tubera ischii, 8.5 cm.; the internal measurements were not made. From successive observations it was thought there was a fair chance that the presenting head would engage and descend, if the pains were normally effective. Through some misunderstanding the case was not seen after the 36th week until fullterm labor had been in progress for from 12 to 15 hours: it was then found that while the head, in occipito left anterior position, was firmly held over the superior strait during uterine contractions, it was not well engaged. The woman and foetus were both in good condition, and no vaginal examination had been made since labor began. The woman was obviously still in the first stage, and the membranes had not ruptured. The baby was estimated to weigh eight pounds. Take up the case at this point, and outline the course you would pursue. Give your reasons for your line of action.

7. A young woman enters hospital in active second-stage labor, and the presenting head is already bulging the perineum with each successive pain. It is obvious that she will soon deliver herself. It is discovered in the hurried preparation of the genitalia that an abscess of one of Bartholini's glands has recently ruptured and is still discharging. There is no time for a bacteriological examination; but what is the probable aetiology of the abscess, what are the dangers to mother and foetus, and what can be done in the way of prophylaxis?

8. A consultant is asked to see a quadrigravida in her 36th week on account of increasing dyspnoea and cyanosis: she had been as quiet as possible for several weeks in her tenement home in a third story, but without satisfactory improvement. She is found to have double mitral disease, with systolic and prae-systolic murmur, but without marked cardiac enlargement. There is no pulmonary or other oedema, and the general health is very good. Transfer to hospital is advised and accepted: if in charge of the case in hospital, how would you proceed with it?

9. A multigravida, who works daily in a laundry, when in her 37th week had a considerable uterine haemorrhage. A competent obstetrician firmly packed the vagina and sent her to hospital, where the pack was removed: digital examination through a patulous cervix found the edge of the placenta within reach. No bleeding was excited by the examination. The foetal heart sounds were satisfactory. How would you proceed with the care of this case?

10. What are the characteristic differences between septic and putrid puerperal endometritis, and on what general principles should each type of infection be treated?

GYNAECOLOGY — Professor GREEN

1. In the face of marked pelvic congestion, whether consequent on infection or on circulatory disturbances, what local measures are usually effective in relieving symptoms and in preparing the patient for subsequent treatment? Describe in some detail the measures you would employ.

2. In what periods of woman's life history are carcinoma, myoma, and sarcoma most frequently observed respectively? In view of the frequency and fatality of uterine carcinoma, what means do you think could be adopted by which this affection could be brought to early diagnosis with a view to successful surgical treatment?

3. Aside from the infections of impure sexual relation, what is the most frequent source of pelvic infection? In what ways may bacterial invasion reach the Fallopian tube and peritoneum other than by way of the vagina? What infections are most fatal to life, and what are more likely to cause local destructive processes without great menace to life?

4. Make a differential diagnosis between ovarian cystoma extending a hand's breadth above the umbilicus, and other abdominal tumors. In the event of axial rotation of an ovarian cyst, what changes are likely to occur in the tumor, and what are the symptoms and physical findings which point to the occurrence of this phenomenon?

DERMATOLOGY — Professor WHITE

1. Treatment of acne vulgaris.
2. Differential diagnosis of pityriasis rosea and psoriasis.
3. Sycosis vulgaris.
4. Treatment of fresh ivy poisoning.
5. Differential diagnosis of lupus erythematosus and acne rosacea

SYPHILIS — Professor POST

1. What are the general characteristics of primary syphilis without regard to its situation?

2. What is necessary to establish the truth of a syphilitic re-infection?

3. Mention the various tests and methods of precision which may be used in the diagnosis of syphilis?

4. What is the value of a negative Wassermann?

5. You suggest the use of Salvarsan to a patient. He tells you that he has been warned against the drug and asks you to tell him the exact truth about it. What will you say to him?

NEUROLOGY — Assistant Professor TAYLOR

1. Signs and symptoms of intracranial pressure. Under what conditions does it occur?

2. Significance of exaggerated knee-jerk. (a) Without ankle clonus; (b) with ankle clonus.

3. What is the result of a destructive lesion of (a) the ventral horns of the cord; (b) the dorsal tracts; (c) a peripheral nerve; (d) the posterior portion of the capsule; (e) the mid precentral region of the cerebral cortex?

4. Brief statement of recent views of hysteria.

PSYCHIATRY — Dr. ADLER

1. Describe the symptoms of delirium tremens.
2. What do the following terms signify ?
 - (a) Euphoria.
 - (b) Expansive delusions.
 - (c) Negativism.
 - (d) Echopraxia.
3. Discuss briefly the prognosis in manic depressive insanity.
4. Describe the functions of the physician in committing a patient.
5. Discuss briefly the following cases:—
Male, thirty-six years of age, single. Occupation, attorney.

HISTORY

Father died at fifty-six of Bright's Disease. Mother, sixty-three, living and well. Maternal grandparents both died of consumption. One maternal uncle died at sixty of "softening of the brain" following several shocks. Two brothers, both well. One sister well. With the exception of uncle, no history of insanity in the family. Patient had usual diseases of childhood. Nine or ten years ago had pneumonia. Was in the hospital for seven weeks. Fifteen years ago had chancre, for which he was treated. Is a periodic drinker; admits occasional alcoholic excesses. "Smokes cigarettes inveterately all day long."

About three months ago began to suffer from insomnia, which has gradually become worse. His appetite is diminished. Bowels constipated. Lost fifteen pounds in weight. His business has been very poor, and he has become involved in financial difficulties. He is very much worried about his affairs and is getting despondent. Complains that his head is not clear.

About six weeks ago he took sixty grains of trional with suicidal intent. A few days later he took one corrosive sublimate tablet, but vomited it up again. For the past three months he has taken one or two ten-grain tablets of trional every night to induce sleep. They have helped him but little. He has been living in a furnished room, but his money has given out, so was sent to the hospital by a physician.

PHYSICAL EXAMINATION

Head well formed. Teeth are decayed. Tongue protrudes in median line. Lungs: slight dulness and crepitant rales in both apices. Heart: soft blowing systolic murmur at apex. Second pulmonic slightly accentuated. Abdominal contents: nothing of note. Slight superficial inguinal adenitis. Epitrochlear gland palpable. Coarse tremor of the extended fingers. Pupils equal and contract on distant vision. Slight sluggish contraction in response to light. Slight tremor of tongue. Knee-jerks lively, both sides. Wrist and elbow-jerks lively, both sides. No ankle clonus, Babinski or Oppenheim. Stands in Rhomberg's position. No disturbance of gait. No paralyses.

MENTAL EXAMINATION

Speech slow. Some retardation. Articulation and enunciation fair. Orientation perfect. Memory good. Answers the test questions correctly. Shows no intelligence defect. No evidence of hallucinations or delusions. Emotionally depressed and unhappy. Flow of thought is slow. General conduct orderly. Patient seems confused. Says: "I am all in. My mind is all gone."

Serum gives a positive Wassermann reaction. Examination of the spinal fluid shows a positive Wassermann reaction. Globulin increased in amount. There are twenty-two cells to the cubic millimeter.

Urine examination. Amber, acid, sp. gr. 1025, albumin none, sugar none.

Female aged twenty-one, single. Occupation, waitress. Was brought to the hospital by her mother because she had been so excited at home that it was impossible for the family to care for her.

HISTORY

Father and mother living and well. Grandparents (maternal) alive. Paternal grandparents died over sixty years of age. Cause unknown. No history of tuberculosis, syphilis, or nervous or mental disease in the family. Patient is one of seven. Three sisters and three brothers, all living and well. Patient had measles and whooping-cough during early childhood. Pneumonia two years ago. In a hospital five weeks. Otherwise no serious illness. Catamenia began at fifteen. Irregular, painful. Patient had a good school education, graduated from the high school at eighteen years of age.

About two weeks before admission, while waitress in a summer hotel, began to forget her orders, and was very nervous. On being spoken to by the head waitress, became very much confused and wept. Lost her temper in the dining-room before the guests. Was sent to her room, where she went to bed and cried all night. Is said to have had a convulsion shortly after the incident in the dining-room, and has had two or three convulsions since then. Lay in bed for two or three days, moaning occasionally and appearing to be very much depressed mentally; refused to answer questions. Was tidy. Mother took patient home with her, but the conditions grew worse. The patient became so restless at night that the family were afraid the neighbors would complain. On admission to the hospital had to be carried to the ward. Was mute and passively resistant.

PHYSICAL EXAMINATION

Well developed, fairly well nourished young woman. Skin hot, soft, and moist. Pupils are widely dilated, equal, react to light. Teeth poor. No glandular enlargement. Examination of thoracic and abdominal contents shows nothing of note. All reflexes active. Pulse is ninety to the minute, small in volume, low tension.

August 3. Two days after admission, temperature is 101.2, pulse 128, respiration 24. Blood examination for leucocytes, 17,000. 77 per cent polymorphonuclears; 22 per cent lymphocytes; 2 per cent eosinophiles. Slight enlargement of upper cervical lymph glands. Tonsils and pharynx appear red. No membrane or exudate. Culture from throat shows staphylococci. No K.-L. Wassermann, serum negative.

Examination of the spinal fluid, Wassermann negative. Globulin not increased. No cells. No tubercle bacilli.

August 7. Four days later, temperature 98.4; pulse 72; respiration 20. Patient has been artificially fed ever since admission. Does not talk, is resistive, restless, tossing about the bed, throwing off bed clothes. Sleeps well at night. Refuses to eat.

October 10. Two months later. Since the last note patient has gradually become less restless. Now sits up in chair most of the day. Keeps her clothes on. Is mute and resistive.

November 14. Five weeks later. Patient was discharged today. Left the hospital apparently restored to health. Bright and cheerful. Thanked the hospital authorities for their kindness and care of her. During the past five weeks patient has gained twenty-five pounds in weight, and has gradually regained control of her movements. There is a marked memory defect for most of the time spent at the hospital. Patient's memory is good for events of the past four weeks.

OPHTHALMOLOGY — Professor STANDISH

1. Give the Helmholtz theory of accommodation.
2. To what dangers does a perforating injury of the eye-ball expose a patient.
3. The clinical history, methods of diagnosis, and treatment in Cataract.
4. What is the Characteristic Field of Vision in Glaucoma?
5. What ocular symptom may appear in

Diabetes?	Tabes?
Diphtheria?	Nephritis?

OTOLOGY — Professor BLAKE

1. Describe the bony labyrinth and give its position in the petrous portion of the temporal bone.
2. What changes in position of the sound transmitting apparatus of the middle ear are effected by contraction of the Tensor Tympani muscle?
3. In what way do adenoids affect the function of the middle ear?
4. Describe a case of acute congestion of the middle ear in a child and indicate the treatment.
5. What is the difference between ligamentous and bony fixation of the stapes in effect?
6. Under what conditions is paracentesis of the drum-head required?

LARYNGOLOGY — Professor COOLIDGE

1. Describe the blood supply of the nasal septum.
2. The more common causes of nasal obstruction.
3. The histological changes occurring in acute tonsillitis.
4. Describe peritonsillar abscess.
5. Describe the glottis.

THE MEDICAL SCHOOL

CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH

Grinnell, Francis Browne, A.B. 1909, M.D. 1913,	Dover
Schuster, Bruno Lyonel, M.D. (<i>Univ. of Michigan</i>)	
1897, B.S. (<i>Jefferson Medical Coll.</i>) 1898,	Milwaukee, Wis.

FOURTH CLASS

Albee, Kenneth Field, PH.B. (<i>Brown Univ.</i>) 1910,	Wollaston
Alton, Benjamin Harrison, S.B. (<i>So. Dakota State Coll.</i>) 1908, S.M. (<i>ibid.</i>) 1910,	Brookings, So. Dak.
Andrews, Sumner Cheever, A.B. 1910,	Gloucester
Aub, Joseph Charles, A.B. 1911,	Cincinnati, O.
Bachman, George Warren, A.B. 1908,	Wilkes-Barre, Pa.
Beard, Archibald Hildreth, A.B. (<i>Kansas Univ.</i>) 1910,	La Junta, Colo.
Belding, David Lawrence, A.B. (<i>Williams Coll.</i>)	
1905, M.D. (<i>Boston Univ. Sch. of Med.</i>) 1913,	Wellfleet
Bill, José Penteadó, A.B. (<i>Dickinson Coll.</i>) 1907,	Harrisburg, Pa.
Binger, Carl Alfred Lanning, A.B. 1910,	New York, N. Y.
Brett, Afley Leonel, A.B. (<i>Brown Univ.</i>) 1910,	So. Braintree
Brown, Herbert Rutherford, S.B. (<i>Univ. of Rochester</i>) 1901,	Jamaica Plain
Burket, Ivan Roy, A.B. (<i>Univ. of Kansas</i>) 1910,	
A.M. (<i>ibid.</i>) 1911,	Wetmore, Kan.
Burpee, Benjamin Prescott, A.B. (<i>Dartmouth Coll.</i>)	
1909,	Manchester, N. H.
Caro, Heiman, A.B. 1911 (1910),	Chelsea
Cheever, Austin Walter, A.B. 1910,	Mattapan
Cobb, Stanley, A.B. 1910,	Milton
Cohen, Joseph Powitzer, A.B. 1909,	Newburgh, N. Y.
Cook, Ward Hance, A.B. (<i>Univ. of Kansas</i>) 1909,	
A.M. (<i>ibid.</i>) 1910,	Kansas City, Mo.
Crabtree, Ernest Granville, PH.B. (<i>Univ. of Wooster</i>)	
1906,	Zanesville, O.
• Cragin, Horace Stuart, S.B. (<i>Amherst Coll.</i>) 1910,	Brooklyn, N. Y.
Crawford, Clay, A.B. (<i>Yale Univ.</i>) 1909,	Ft. Thomas, Ky.

Donovan, Jeremiah John, A.B. (<i>Boston Coll.</i>) 1900,	Randolph
Durrett, James Johnson, S.B. (<i>Univ. of Alabama</i>) 1908,	Northport, Ala.
Fay, William James, A.B. (<i>Clark Univ.</i>) 1910,	Worcester
Fernández, Miguel Joaquin, A.B. (<i>Colegio Pinillos, Colombia, S. A.</i>) 1907,	Mompox, Colombia, S.A.
Fiske, Cyrus Hartwell, A.B. (<i>Univ. of Minnesota</i>) 1910,	St. Paul, Minn.
Fornell, Carl Hernfrid, A.B. 1910,	Quincy
Foster, Thomas Albert, A.B. (<i>Dartmouth Coll.</i>) 1910,	Portland, Me.
Gillette, George Henry, A.B. (<i>Cornell Coll.</i>) 1910,	Bayport, N. Y.
Gosline, Harold Inman, A.B. 1909,	Roxbury
Gray, Horace, A.B. 1909,	Boston
Green, Hyman, A.B. 1911,	Boston
Hanchett, Alsoberry Kaumu, A.B. 1911 (1910),	Waimea, Hawaii
Hill, Frederick Thayer, S.B. (<i>Colby Coll.</i>) 1910,	Waterville, Me.
Hyde, Harold Valmore, S.B. (<i>Dartmouth Coll.</i>) 1910,	Lynn
Johnson, Harold Bartlett, A.B. 1911,	Cattaraugus, N. Y.
Leavitt, Peirce Henry, S.B. 1910,	Cambridge
Lehman, Edwin Partridge, A.B. (<i>Williams Coll.</i>) 1910,	Redlands, Cal.
Levine, Samuel Albert, A.B. 1911,	Roxbury
Lieb, Clarence William, A.B. (<i>Colorado Coll.</i>) 1908, A.M. (<i>ibid.</i>) 1909,	Manzanola, Colo.
Long, James Harmount, A.B. (<i>Ohio Wesleyan Univ.</i>) 1904, A.M. (<i>ibid.</i>) 1907,	Cambridge
Louis, Lawrence Joseph, Jr., A.B. (<i>Holy Cross Coll.</i>) 1910,	Jamaica Plain
Lunt, Lawrence Kirby, A.B. 1909,	Colorado Springs, Colo.
Lurier, Israel, A.B. (<i>Clark Univ.</i>) 1910,	Worcester
McMahon, William Edward Roche, A.B. (<i>Holy Cross Coll.</i>) 1910,	Worcester
Marvin, Frank William, A.B. 1910,	Cambridge
Millet, John Alfred Parsons, A.B. 1910,	Boston
Moor, Henry Britt, S.B. (<i>Colby Coll.</i>) 1910,	Waterville, Me.
Morrison, Wayland Augustus, A.B. (<i>Leland Stanford Jr. Univ.</i>) 1910,	Los Angeles, Cal.
Morrissey, John Henry, Jr., A.B. (<i>Brown Univ.</i>) 1910,	Bristol, R. I.
Munro, Donald, A.B. 1911,	Milton
New, Way Sung, A.B. (<i>St. John's Coll.</i>) 1910,	Shanghai, China

Ohler, William Richard, s.B. 1910,	Bethel, Conn.
Packard, George Byron, Jr., A.B. (<i>Univ. of Colorado</i>) 1910,	Denver, Colo.
Richardson, Henry Barber, A.B. 1910,	Boston
Rochford, Richard Augustine, A.B. (<i>Holy Cross Coll.</i>) 1910,	Newton Lower Falls
Root, Raymond Richmond, s.B. (<i>Dartmouth Coll.</i>) 1905,	Georgetown
Schofield, Roger William, A.B. (<i>Clark Univ.</i>) 1910,	Worcester
Shohl, Alfred Theodore, A.B. 1910,	Cincinnati, O.
Solomon, Harry Caesar, s.B. (<i>Univ. of California</i>) 1910,	Los Angeles, Cal.
Stevens, Harold Wentworth, A.B. (<i>Bates Coll.</i>) 1906,	Saco, Me.
Stoddard, James Leavitt, A.B. 1910,	Northampton
Tyler, Fred Sylvester, A.B. (<i>Yale Univ.</i>) 1895,	Roxbury
Vernlund, Carl Frithiof, s.B. (<i>So. Dakota State Coll.</i>) 1909,	Jungskola, Sweden
Winchester, Harold Eugene, s.B. (<i>Dartmouth Coll.</i>) 1910,	Bismarck, No. Dak.
Withington, Paul, A.B. 1909,	Cambridge
Wright, Wade Stanley, s.B. (<i>Univ. of Pittsburgh</i>) 1910,	Pittsburgh, Pa.

 THIRD CLASS

Allen, Edward Bartlett, A.M. (<i>Brown Univ.</i>) 1911,	Centreville, R. I.
Amiral, Hiram Hygazon, A.B. (<i>Univ. of Rochester</i>) 1911,	Alameda, Cal.
Appleton, Paul, PH.B. (<i>Brown Univ.</i>) 1911,	Providence, R. I.
Babington, Vernon Edgar, A.B. (<i>Brown Univ.</i>) 1911,	Cranston, R. I.
Bloomer, Earl, A.B. (<i>Univ. of Missouri</i>) 1913,	St. Joseph, Mo.
Bock, Arlie Vernon, A.B. (<i>Upper Iowa Univ.</i>) 1910,	Dubuque, Ia.
Boller, Stanley, A.B. (<i>Univ. of Southern California</i>) 1911,	Los Angeles, Cal.
Bowes, Frank Arthur, A.B. (<i>Holy Cross Coll.</i>) 1910,	Waterbury, Conn.
Bridges, Edwin Stanley, A.B. (<i>Univ. of New Brunswick</i>) 1908,	St. John, N. B.
Brown, George Percy, A.B. (<i>Yale Univ.</i>) 1911,	Barre
Brown, Harry Henderson, Jr., A.B. (<i>Univ. of Texas</i>) 1910,	Yoakum, Texas

- Bumpus, Hermon Carey, Jr., PH.B. (*Brown Univ.*) 1912, Madison, Wis.
- Bunker, Henry Alden, Jr., A.B. 1910, Brooklyn, N.Y.
- Caldarone, Alfred Anthony, A.B. (*Holy Cross Coll.*) 1911, Providence, R. I.
- Christman, Robert Albert, PH.B. (*Lafayette Coll.*) 1911, Kresgeville, Pa.
- Clason, Freeman Pell, A.B. (*Bates Coll.*) 1911, Gardiner, Me.
- Cleaves, Edwin Nelson, A.B. 1911, Medford
- Cline, Samuel, S.B. 1911, Roxbury
- Cook, Edgar Charles, A.B. (*Lake Forest Coll.*) 1911, Mendota, Ill.
- Cummings, Edward Joseph, A.B. (*Boston Coll.*) 1911, So. Boston
- Curtin, John Francis, A.B. (*Holy Cross Coll.*) 1911, Lawrence
- Devine, Bernard Francis, A.B. 1911, So. Boston
- Diehl, Oliver Roland, A.B. 1912, Ambler, Pa.
- Dole, Kenneth Llewellyn, A.B. (*Leland Stanford Jr. Univ.*) 1912, Jamaica Plain
- Donnell, Clyde Henry, A.B. (*Howard Univ.*) 1911, Greensboro, N.C.
- Downing, John Godwin, A.B. (*Boston Coll.*) 1911, So. Boston
- Durkin, Harry Anthony, A.B. (*Holy Cross Coll.*) 1911, Peoria, Ill.
- Dwinell, George Francis, A.B. (*Dartmouth Coll.*) 1911, Manchester, N. H.
- Edwards, Henry William, Jr., S.B. (*Univ. of Rochester*) 1911, Brockport, N. Y.
- Edwards, Sumner, A.B. (*Bowdoin Coll.*) 1910, Bethel, Me.
- Edwards, Walter Davis, A.B. (*Univ. of Rochester*) 1911, Brockport, N. Y.
- Fein, Harry, A.B. 1911, Boston
- Flagg, Charles Monroe, S.B. 1905, Cambridge
- Généreux, Edmond Alfred, A.B. (*Holy Cross Coll.*) 1911, Webster
- Gibson, Arthur Collis, A.B. (*Bowdoin Coll.*) 1911, Jamaica Plain
- Gillespie, Norman Wilkinson, S.B. (*Tufts Coll.*) 1911, Dorchester
- Gillon, Charles Joseph Carroll, PH.B. (*Holy Cross Coll.*) 1911, Taunton
- Gilpatrick, Leon Southard, A.B. (*Colby Coll.*) 1909, Hartland, Me.
- Grabfield, Gustave Philip, A.B. (*Williams Coll.*) 1912, Cincinnati, O.
- Hankey, Daniel Clyde, A.B. (*Westminster Coll.*) 1909, Ford City, Pa.

- H'Doubler, Francis Todd, A.B. (*Univ. of Wisconsin*)
 1907, Madison, Wis.
 Hodgson, John Sprague, PH.B. (*Brown Univ.*) 1912
 (1911), Esmond, R. I.
 Hudson, Carl Bibb, A.B. 1912 (1911), Montgomery, Mo.
 Jackson, Arthur Morison, S.B. (*Dartmouth Coll.*)
 1911, Everett
 Janney, James Craik, A.B. 1911, Wynnewood, Pa.
 Johnson, Odin James, A.B. (*Univ. of Minnesota*)
 1911, Lyle, Minn.
 Kibby, Sydney Vernon, A.B. 1908 (1907), Chelsea
 Lawler, John Charles, A.B. (*Holy Cross Coll.*) 1911, Bellows Falls, Vt.
 Lee, Edward Kerk, A.B. (*Loyola Coll.*) 1910, Perryman, Md.
 Lowrey, Lawson Gentry, A.B. (*Univ. of Missouri*)
 1909, A.M. (*ibid.*) 1910, Excelsior Springs, Colo.
 McCaffrey, Jerome Joseph, A.B. (*Holy Cross*
Coll.) 1911, Attleboro
 McGuire, Joseph Hoshal, A.B. (*Eureka Coll.*)
 1911, Eureka, Ill.
 MacPherson, Donald John, S.B. (*Univ. of Roches-*
ter) 1911, Palmyra, N. Y.
 McQuesten, Philip, A.B. (*Dartmouth Coll.*) 1911, Nashua, N. H.
 Magoon, Charles Elmer, A.B. (*Morningside Coll.*)
 1910, Boston
 Mallory, Meredith, A.B. (*Univ. of Illinois*) 1911, Batavia, Ill.
 Meaker, Samuel Raynor, A.B. (*Princeton Univ.*)
 1911, Carbondale, Pa.
 Montgomery, James Blaine, A.B. (*Dartmouth*
Coll.) 1911, Boston
 Morriss, William Sarsfield, A.B. 1911, Fall River
 Murray, George Aloysius, A.B. (*Boston Coll.*) 1909, Dorchester
 Packard, Fabyan, A.B. 1912, Allston
 Peck, Martin William, S.B. (*Dartmouth Coll.*)
 1902, Lynn
 Perkins, William Albert, A.B. 1912, Ogden, Utah
 Plouffe, Bernard Louis, A.B. (*Holy Cross Coll.*)
 1911, Webster
 Raia, Joseph Ernest, A.B. (*Brown Univ.*) 1911, Providence, R. I.
 Redden, William Rufus, A.B. (*Bates Coll.*) 1906, Roxbury
 Richardson, Ira Walter, A.B. (*Colby Coll.*) 1910, Kennebunk, Me.
 Sargent, Arthur Forrest, A.B. (*Dartmouth Coll.*)
 1911, Pittsfield, N. H.

Sharry, Charles Francis, A.B. 1910,	Roxbury
Sowles, Horace Kennedy, A.B. (<i>Clark Univ.</i>) 1910,	Barre, Vt.
Spruit, Charles Booth, A.B. (<i>Illinois Coll.</i>) 1908,	Jacksonville, Ill.
Stern, Neuton Samuel, A.B. 1912,	Memphis, Tenn.
Strauss, Arthur Edgar, S.B. 1912,	St. Louis, Mo.
Thaxter, Langdon Thom, A.B. (<i>Williams Coll.</i>) 1911,	Portland, Me.
Thomas, Harold, A.B. (<i>Acadia Coll.</i>) 1910,	Wollaston
Tucker, Cassell Clark, A.B. (<i>De Pauw Univ.</i>) 1911,	Greencastle, Ind.
Van Gorder, George Wilson, A.B. (<i>Williams Coll.</i>) 1911,	Pittsburgh, Pa.
Van Stone, Leonard Mathews, A.B. (<i>Colorado Coll.</i>) 1911,	Dallas, Tex.
Washburn, Arthur Lawrence, A.B. 1910,	New York, N.Y.
Woodward, Harry Whiting, A.B. (<i>Bowdoin Coll.</i>) 1910,	Colorado Springs, Colo.
Wright, Louis Tompkins, A.B. (<i>Clark Univ., Atlanta, Ga.</i>) 1911,	Atlanta, Ga.

 SECOND CLASS

Aaronson, Jacob, A.B. 1912,	Chelsea
Allen, Walter Charles, S.B. (<i>Univ. of Rochester</i>) 1911,	Rochester, N.Y.
Barrow, William Hulbert, A.B. 1908,	Chelsea
Betteridge, Lawrence Augustine, A.B. 1912,	Boston
Bigelow, George Hoyt, A.B. 1913 (1912),	Framingham
Briggs, Maurice Taggart, A.B. 1912,	E. Lynn
Bronk, Marcellus, A.B. (<i>Cornell Univ.</i>) 1910,	Amsterdam, N. Y.
Butler, Edmund John, A.B. (<i>Boston Coll.</i>) 1912,	Cambridge
Churchill, Kenneth, A.B. (<i>Bowdoin Coll.</i>) 1912,	Newtonville
Dillon, Edward Saunders, A.B. (<i>Princeton Univ.</i>) 1911,	Woodbury, N. J.
Foley, John Arthur, A.B. 1911,	Dorchester
Gilbert, John Joseph, A.B. (<i>Brown Univ.</i>) 1912,	Woonsocket, R. I.
Goethals, Thomas Rodman, A.B. 1912,	Culebra, C. Z., Panama
Golden, Ross, A.B. (<i>Cornell Coll.</i>) 1912,	Boone, Ia.
Grace, Clarence Milo, A.B. (<i>Washington State Univ.</i>) 1912,	Chillicothe, Mo.
Gregg, Alan, A.B. 1911,	Chestnut Hill
Gustafson, Paul, A.B. 1912,	Cambridge
Hamilton, John Homer, S.B. (<i>Oklahoma Agricul- tural and Mechanical Coll.</i>) 1910,	Stillwater, Okla.

Harding, Edward, A.B. 1911,	Boston
Harris, Carl Thorburn, S.B. (<i>Univ. of Rochester</i>) 1912,	Spencerport, N. Y.
Hodgdon, Frank Wellington, Jr., A.B. 1911,	Arlington
Horan, Joseph Carrigan, A.B. (<i>Sacred Heart Coll.</i>) 1911, A.M. (<i>ibid.</i>) 1913,	Denver, Colo.
Houston, David Walker, Jr., A.B. (<i>Princeton Univ.</i>) 1912,	Troy, N. Y.
Hurst, Benoni Price, A.B. (<i>Amherst Coll.</i>) 1912,	Baltimore, Md.
Hyman, Clarence Henry, S.B. (<i>Heidelberg Univ.</i>) 1911,	Payne, O.
Koefod, Hilmar, S.B. (<i>Beloit Coll.</i>) 1911,	Glenwood, Minn.
Lacey, Walter Hamer, A.B. 1912,	Wollaston
Langmann, Alfred Gustav, A.B. 1912,	New York, N. Y.
Lanman, Thomas Hinckley, A.B. 1912,	Cambridge
Learned, Elmer Turell, A.B. (<i>Yale Univ.</i>) 1912,	Fall River
Lowry, Franklin Patterson, S.B. 1912,	Newton
Lyon, Arthur Bates, A.B. (<i>Amherst Coll.</i>) 1912,	Brockton
McIntyre, John Archibald, S.B. (<i>Cornell Coll.</i>) 1912,	Mt. Vernon, Ia.
Moffat, Barclay Wellington, A.B. 1912,	Orange, N. J.
Montgomery, Orlando Franklin, A.B. (<i>Leland Stanford Jr. Univ.</i>) 1910,	Tulare, Cal.
Morris, Samuel Leslie, Jr., S.B. (<i>Davidson Coll.</i>) 1911,	Atlanta, Ga.
Nichols, Andrew, 3d, A.B. 1912,	Hathorne
Nissen, Harry Archibald, A.B. (<i>Univ. of So. Dakota</i>) 1911,	Vermillion, So. Dak.
Oberg, Frank Thorwald, A.B. (<i>Clark Coll.</i>) 1912,	Worcester
Osgood, Howard, 2d, A.B. 1911,	Boston
Oslin, Joseph Edwin, A.B. (<i>Brown Univ.</i>) 1910,	Boston
Parker, Frederic, Jr., A.B. 1913,	Bedford
Peabody, Charles William, A.B. 1912,	Malden
Putnam, James Jackson, Jr., A.B. 1912,	Boston
Ragle, Benjamin Harrison, A.B. (<i>De Pauw Univ.</i>) 1912,	Spencer, Ind.
Rapport, David Louis, A.B. 1912,	Pittsburgh, Pa.
Redway, Lawrence David, A.B. 1912,	Cincinnati, O.
Rhea, Clarence Ward, A.B. (<i>Austin Coll.</i>) 1910,	Forney, Tex.
Ricci, James Vincent, A.B. (<i>Brown Univ.</i>) 1913,	Providence, R. I.
Roberts, Bertrand Earle, A.B. 1912,	Newton Centre
Settle, Howard Edwin, A.B. 1913 (1912),	Berne, N. Y.
Stidger, Ivan Read, A.B. (<i>Allegheny Coll.</i>) 1911,	Cameron, W. Va.

Taylor, John Houghton, A.B. 1913 (1912),	Cambridge
Thomasson, Aaron Hood, A.B. (<i>Lincoln Univ.</i>) 1896,	Boston
Tully, George Loughlin, A.B. 1912,	Milford
Vail, Harris Holmes, A.B. (<i>Yale Univ.</i>) 1912,	Cincinnati, O.
Viets, Henry Rouse, Jr., S.B. (<i>Dartmouth Coll.</i>) 1912,	Newton
Waite, John Herbert, S.B. (<i>Bucknell Univ.</i>) 1911,	Lock Haven, Pa.
Weld, Stanley Burnham, A.B. (<i>Dartmouth Coll.</i>) 1912,	Winchester
Wells, Ward Stanley, S.B. (<i>Grinnell Coll.</i>) 1909,	Nashua, Ia.
Wilbur, George Browning, 2d, S.B. 1912,	W. Newton
Withington, Paul Richmond, A.B. 1912,	Boston

FIRST CLASS

Adams, Frank Dennette, LITT.B. (<i>Princeton Univ.</i>) 1913,	Washington, D. C.
Adams, William Bradford, A.B. 1913,	Springfield
Ashton, Leslie Orrell, S.B. (<i>Dartmouth Coll.</i>) 1913,	Lawrence
Astrin, Albert, A.B. 1911,	Boston
Baker, Horace Mitchell, S.B. (<i>Mass. Agricultural Coll.</i>) 1912,	Selbyville, Del.
Belknap, Robert Willis, A.B. (<i>Bowdoin Coll.</i>) 1913,	Damariscotta, Me.
*Berry, Francis Browne (<i>Harvard</i>),	Providence, R. I.
Borchardt, Henry Gustav, A.B. 1913,	Meriden, Conn.
Brady, John William Stansbury, A.B. 1910,	Baltimore, Md.
Brennan, James Andrew, Jr., A.B. (<i>Holy Cross Coll.</i>) 1913,	East Hartford, Conn.
Brennan, James Thomas, A.B. (<i>Rock Hill Coll.</i>) 1909,	Clarksburg, W. Va.
Brown, Frederick Ronald, A.B. (<i>McGill Univ.</i>) 1913,	Danville, Quebec, Can.
Buchanan, Edwin Porter, S.B. (<i>Princeton Univ.</i>) 1913,	Pittsburgh, Pa.
Bugbee, Edwin Percy, S.B. (<i>Tufts Coll.</i>) 1912,	Methuen
Busby, Eldon Durward, A.B. (<i>McGill Univ.</i>) 1913,	Ottawa, Ont.
Carey, Henry Reginald, A.B. 1913,	Cambridge
†Cassidy, Franklin Chester,	Medford
Chapman, William Harden, A.B. 1913,	E. Brewster

* Has completed work in Harvard College for the Bachelor's degree.

† Admitted as per Clause II of Admission Requirements, page 20.

Cheney, Marshall Chipman, A.B. (<i>Univ. of California</i>) 1909,	Berkeley, Cal.
Chisholm, Lawrence Chesley, S.B. (<i>Dartmouth Coll.</i>) 1913,	Salem
Clifford, Randall, A.B. 1912,	New Bedford
Clifford, Wallace Alton, A.B. (<i>Bates Coll.</i>) 1908,	South Paris, Me.
Cunningham, Thomas Donald, S.B. (<i>Dartmouth Coll.</i>) 1913,	Denver, Colo.
Davis, David Alfred, A.B. (<i>Howard Univ.</i>) 1912,	Galveston, Tex.
*Dresel, Rudolph Ludwig (<i>Univ. of California</i>),	San Francisco, Cal.
†Eaton, Harold Burney,	Frankfort a.m., Germany
FitzGerald, Edmund Boyd, A.B. 1913,	Wollaston
Fogg, Neil Augustus, A.B. (<i>Bowdoin Coll.</i>) 1913,	Freeport, Me.
†Frost, Morton Fletcher,	Rumford, R.I.
Gould, Adrian Gordon, PH.B. (<i>Brown Univ.</i>) 1913,	Youngstown, O.
Goulding, Arthur Melville, A.B. (<i>Univ. of Toronto</i>) 1910,	Toronto, Ont., Can.
Grimm, Charles Henry, S.B. (<i>Valparaiso Univ.</i>) 1912,	Chicago, Ill.
†Hadfield, Jonathan Pyott,	Edgewood, R. I.
Hall, Francis Cooley, LITT.B. (<i>Princeton Univ.</i>) 1913,	Brookline
Hutchinson, Charles William, A.B. 1906, A.M. 1907,	Framingham
Hutchinson, Rollo Wilson, A.B. (<i>Dartmouth Coll.</i>) 1913,	Milford, N. H.
Isaacson, Abraham Samuel, A.B. (<i>Brown Univ.</i>) 1913,	Bristol, R. I.
Johnston, James Scott, A.B. (<i>Univ. of Michigan</i>) 1910, A.M. (<i>ibid.</i>) 1911,	Ithaca, N.Y.
King, Edward, A.B. (<i>Univ. of Georgia</i>) 1910,	Atlanta, Ga.
*Klein, Armin (<i>Harvard</i>),	Chelsea
Landry, James Maguire Anthony, A.B. (<i>St. Mary's Coll.</i>) 1911, A.M. (<i>ibid.</i>) 1911,	Pawtucket, R. I.
Leighton, Roy Fisher, PH.B. (<i>Univ. of Vermont</i>) 1912, S.M. (<i>ibid.</i>) 1913,	Canton, N.Y.
Lurie, Moses Hyman, D.M.D. 1913,	Dorchester
Lynch, Frank Joseph, PH.B. (<i>Holy Cross Coll.</i>) 1910,	Holyoke
Mabon, Thomas McCance, S.B. (<i>Princeton Univ.</i>) 1913,	Pittsburgh, Pa.

* Has completed work for the Bachelor's degree.

† Admitted as per Clause II of Admission Requirements, page 20.

McCarthy, James Matthew, A.B. (<i>Holy Cross Coll.</i>) 1913,	Woonsocket, R. I.
MacGhee, Aaron Lawson, S.B. (<i>Colby Coll.</i>) 1913,	Augusta, Me.
Marshall, John Ross, A.B. 1913,	Brookline
Meysenbug, Ludo von, A.B. (<i>Washington and Lee Univ.</i>) 1913,	New Orleans, La.
*Moloney, James (<i>Harvard</i>),	So. Boston
Neal, Kemp Prather, A.B. (<i>Trinity Coll.</i>) 1913,	Monroe, N. C.
Nisbet, Douglas Heath, S.B. (<i>Davidson Coll.</i>) 1913,	Charlotte, N. C.
Norbury, Frank Garm, A.B. (<i>Illinois Coll.</i>) 1912,	
A.M. (<i>Univ. of Illinois</i>) 1913,	Springfield, Ill.
Nye, Robert Nason, A.B. 1913,	Springfield
†Oerting, Harry,	St. Paul, Minn.
Parkins, Leroy Edward, A.B. (<i>Simpson Coll.</i>) 1912,	Knowlton, Ia.
Parmenter, Derric Choate, A.B. 1913,	Gloucester
Paul, Benjamin Delos, S.B. (<i>Purdue Univ.</i>) 1912,	Brookston, Ind.
Pennell, Walter Johnson, A.B. (<i>Bates Coll.</i>) 1913,	Auburn, Me.
Persons, Carl Clough, A.B. (<i>Wesleyan Univ., Conn.</i>) 1913,	Maynard
Porter, Ralph Orlando, S.B. (<i>Agricultural Coll. of Utah</i>) 1912,	Porterville, Utah
Pratt, Aaron Paul, A.B. (<i>Clark Univ.</i>) 1913,	So. Framingham
*Reardon, Frank Leo (<i>Harvard</i>),	So. Boston
Reynolds, Patrick Joseph, A.B. (<i>Holy Cross Coll.</i>) 1912, A.M. (<i>Boston Coll.</i>) 1913,	Lowell
Richardson, John Purver, Jr., A.B. (<i>Washington and Lee Univ.</i>) 1913,	Wytheville, Va.
Sattler, Robert Ray, A.B. (<i>Univ. of Michigan</i>) 1911,	Cincinnati, O.
Savage, Joseph Carr, A.B. (<i>Univ. of Colorado</i>) 1913,	Denver, Colo.
Scholl, Albert John, Jr., A.B. (<i>Leland Stanford Jr. Univ.</i>) 1913,	San Francisco, Cal.
†Shirley, John Newton,	So. Duxbury
Sigel, Glenn Lara, A.B. (<i>Amherst Coll.</i>) 1912,	Portland, Ore.
Spring, Henry Powell, A.B. (<i>Univ. of Vermont</i>) 1913,	Dresden, Germany
†Strahlmann, Louis,	San Diego, Cal.
Surls, Joseph Kiddoo, A.B. (<i>Williams Coll.</i>) 1913,	Reading, Pa.
Thompson, Hartwell Greene, A.B. (<i>Yale Univ.</i>) 1913,	Taftville, Conn.

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† Admitted as per Clause II of Admission Requirements, page 20.

†Thorne, Fred Sanborne, Townsend, De Wayne, A.B. (<i>Univ. of Wisconsin</i>) 1912,	Gardiner, Me. Oconomowoc, Wis.
Wearn, Joseph Treloar, S.B. (<i>Davidson Coll.</i>) 1913,	Charlotte, N. C.
Welles, Edward Sawtelle, S.B. (<i>Iowa State Coll.</i>) 1913,	Los Angeles, Cal. Jamaica Plain
Wendell, Percy Langdon, A.B. 1913,	
Wetherell, Bryant Davis, A.B. (<i>Williams Coll.</i>) 1912,	Holyoke Roxbury
White, Joseph Warren, A.B. 1913,	
Wylde, Russell Arthur, A.B. (<i>Dartmouth Coll.</i>) 1912,	Lawrence Rockland
Young, William Bartholomew, A.B. 1913,	
Zovickian, Hovhannes, PH.B. (<i>Brown Univ.</i>) 1909, A.M. (<i>ibid.</i>) 1909,	Providence, R. I.

SPECIAL STUDENTS TAKING REGULAR WORK

Berger, Harry Calvin, A.B. (<i>Univ. of Kansas</i>) 1912,	Halstead, Kan.
Bressler, Charles Wesley, A.B. (<i>Missouri State Univ.</i>) 1913,	Grant City, Mo. Meadville, Pa.
Calvin, Claudius Virgil,	
Grannis, Irving Van Vliet, S.B. (<i>Univ. of Wisconsin</i>) 1912,	Menomonie, Wis. Heber City, Utah
Hatch, Floyd Frost, A.B. (<i>Univ. of Utah</i>) 1912,	
Hunter, William Edward, A.B. (<i>Univ. of Utah</i>) 1913,	American Fork, Utah Newtonville
Jackson, George Henry, Jr.	
Jones, Merritt La Count, S.B. (<i>Univ. of Wisconsin</i>) 1912,	Wausau, Wis.
Kerr, William John, S.B. (<i>Univ. of California</i>) 1912,	Los Angeles, Cal. E. Boston
O'Donnell, John Joseph, Jr.	
Shannon, William Lloyd, A.B. (<i>McGill Univ.</i>) 1909, M.D., C.M. (<i>ibid.</i>) 1911,	Vancouver, B. C. Salem
Shortell, Joseph Henry,	
Smith-Petersen, Marius Mygaard, S.B. (<i>Univ. of Wisconsin</i>) 1910,	Milwaukee, Wis.
Taylor, Clifton Clark, A.B. (<i>Dartmouth Coll.</i>) 1912,	Bridgeport, Conn.

† Admitted as per Clause II of Admission Requirements, page 20.

SUMMARY

CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH	2
CANDIDATES FOR THE DEGREE OF DOCTOR OF MEDICINE	
FOURTH CLASS	67
THIRD CLASS	81
SECOND CLASS	62
FIRST CLASS	84
SPECIAL STUDENTS	14
TOTAL	310

GRADUATES OF COLLEGES

Acadia College	1	Princeton University	7
Agricultural College of Utah	1	Purdue University	1
Allegheny College	1	Rock Hill College	1
Amherst College	1	Sacred Heart College	2
Austin College	1	St. John's College	1
Bates College	6	St. Mary's College	2
Beloit College	1	Simpson College	1
Boston College	3	South Dakota State College	3
Boston University School of Medicine	1	Leland Stanford Jr. University	4
Bowdoin College	6	Trinity College	1
Brown University	15	Tufts College	2
Bucknell University	1	University of Alabama	1
Clark College	1	University of California	4
Clark University (Georgia)	1	University of Colorado	2
Clark University	5	University of Georgia	1
Colby College	5	University of Illinois	2
Colorado College	3	University of Michigan	4
Cornell College	3	University of Minnesota	2
Cornell University	1	University of Missouri	4
Dartmouth College	19	University of New Brunswick	1
Davidson College	3	University of Pittsburgh	1
De Pauw University	2	University of Rochester	7
Dickinson College	1	University of Southern California	1
Eureka College	1	University of South Dakota	1
Grinnell College	1	University of Texas	1
Harvard University	94	University of Toronto	1
Heidelberg University	1	University of Utah	2
Holy Cross College	15	University of Vermont	3
Howard University	2	University of Wisconsin	5
Illinois College	2	University of Wooster	1
Iowa State College	1	Upper Iowa University	1
Jefferson Medical College	1	Valparaiso University	1
Kansas University	4	Washington and Lee University	2
Lafayette College	1	Washington State University	1
Lake Forest College	1	Wesleyan University	1
Lincoln University	1	Westminster College	1
Loyola College	1	Williams College	7
McGill University	4	Yale University	6
Massachusetts Agricultural College	1	Total	307
Morningside College	1	Counted more than once	11
Oklahoma Agricultural and Mechanical College	1	Total Number of College Graduates	296
Ohio Wesleyan University	2	Number of Colleges	81
Colegio Pinillos	1		

ANNOUNCEMENT FOR 1914-15

The next session of the Medical School begins September 28, 1914. All students are required to register at the Dean's office on this day. Students registering in the Medical School for the first time will meet in Room 205 in the Administration Building of the Harvard Medical School, on Monday, the 28th of September, at 10 A.M. Students desiring to enter the Harvard Medical School in the first-year class, or with advanced standing, should write prior to this time to the Secretary of the Harvard Medical School, in regard to conditions for admission and the applicant's ability to meet these.

CALENDAR

1914.

- Sept. 21, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 26, Saturday.* Examination in Chemistry for admission.
- Sept. 28, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Monday.* Columbus Day: a holiday.
- Nov. 2, Monday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 26, Thursday.* Thanksgiving Day: a holiday.
- Nov. 30, Monday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

RECESS FROM DEC. 23, 1914, TO JAN. 2, 1915, INCLUSIVE

1915.

- Jan. 1, Friday.* Last day for receiving dissertations for the Boylston Medical Prizes.
- Jan. 15, Friday.* Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1915.
- Jan. 27, Wednesday.* Mid-year Examinations begin.
- Jan. 30, Saturday.* Payment of the second instalment of the tuition-fee is required on or before this date.

- Feb. 1, Monday.* **Second half-year begins.**
Feb. 22, Monday. Washington's Birthday: a holiday.
April 1, Wednesday. Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 18 TO APRIL 24, INCLUSIVE

- May 1, Saturday.* Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
May 1, Saturday. Last day for receiving applications for the Bullard Fellowships.
May 1, Saturday. Last day for receiving applications for Scholarships for 1915-16 (except the Cheever and Hayden Scholarships).
May 1, Saturday. Last day for receiving applications of candidates for the degree of M.D. in 1915.
May 31, Monday. Memorial Day: a holiday.
June 1, Tuesday. Examinations begin.
June 14, Monday. Examination in Chemistry for admission.
June 24, Thursday. **Commencement.**

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 26, INCLUSIVE

- Sept. 20, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
Sept. 25, Saturday. Examination in Chemistry for admission.
Sept. 27, Monday. **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
Oct. 12, Tuesday. Columbus Day: a holiday.
Nov. 1, Monday. Last day for receiving essays for the William H. Thorndike Prize.
Nov. 25, Thursday. Thanksgiving Day: a holiday.
Nov. 30, Tuesday. Last day for receiving applications for the Cheever and Hayden Scholarships.
Dec. 31, Friday. Last day for receiving dissertations for the Boylston Medical Prizes.



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JUN 1955

WESBY

